FirstRand

'19

basel pillar 3 disclosure

for the year ended 30 June

contents

Basel Pillar 3 disclosure

FirstRand

1966/010753/06
Certain entities within the FirstRand group are Authorised Financial Services and Credit Providers.
This report is available on the group's website:
www.firstrand.co.za

Email questions to
investor.relations@firstrand.co.za

overview of firstrand

FIRSTRAND'S portfolio of integrated financial services businesses comprises FNB, RMB, WesBank, Aldermore and Ashburton Investments. The group operates in South Africa, certain markets in sub-Saharan Africa and the UK, and offers a universal set of transactional, lending, investment and insurance products and services. FCC represents group-wide functions.

Overview of risk management

Introduction

This risk and capital management report (Pillar 3 disclosure) covers the operations of FirstRand Limited (FirstRand or the group) and complies with:

- the Basel Committee on Banking Supervision's (BCBS) revised Pillar 3 disclosure requirements (Pillar 3 standard), BCBS 309 published in January 2015, and the consolidated and enhanced framework, BCBS 400 published in March 2017, as well as the BCBS technical amendment on the regulatory treatment of accounting provisions, published in August 2018; and
- Regulation 43 of the *Regulations relating to Banks* (Regulations), issued in terms of the Banks Act 94 of 1990, Directive D1/2019 on *Matters related to Pillar 3 disclosure requirement framework* and all other Pillar 3 disclosure-related directives issued by the Prudential Authority (PA).

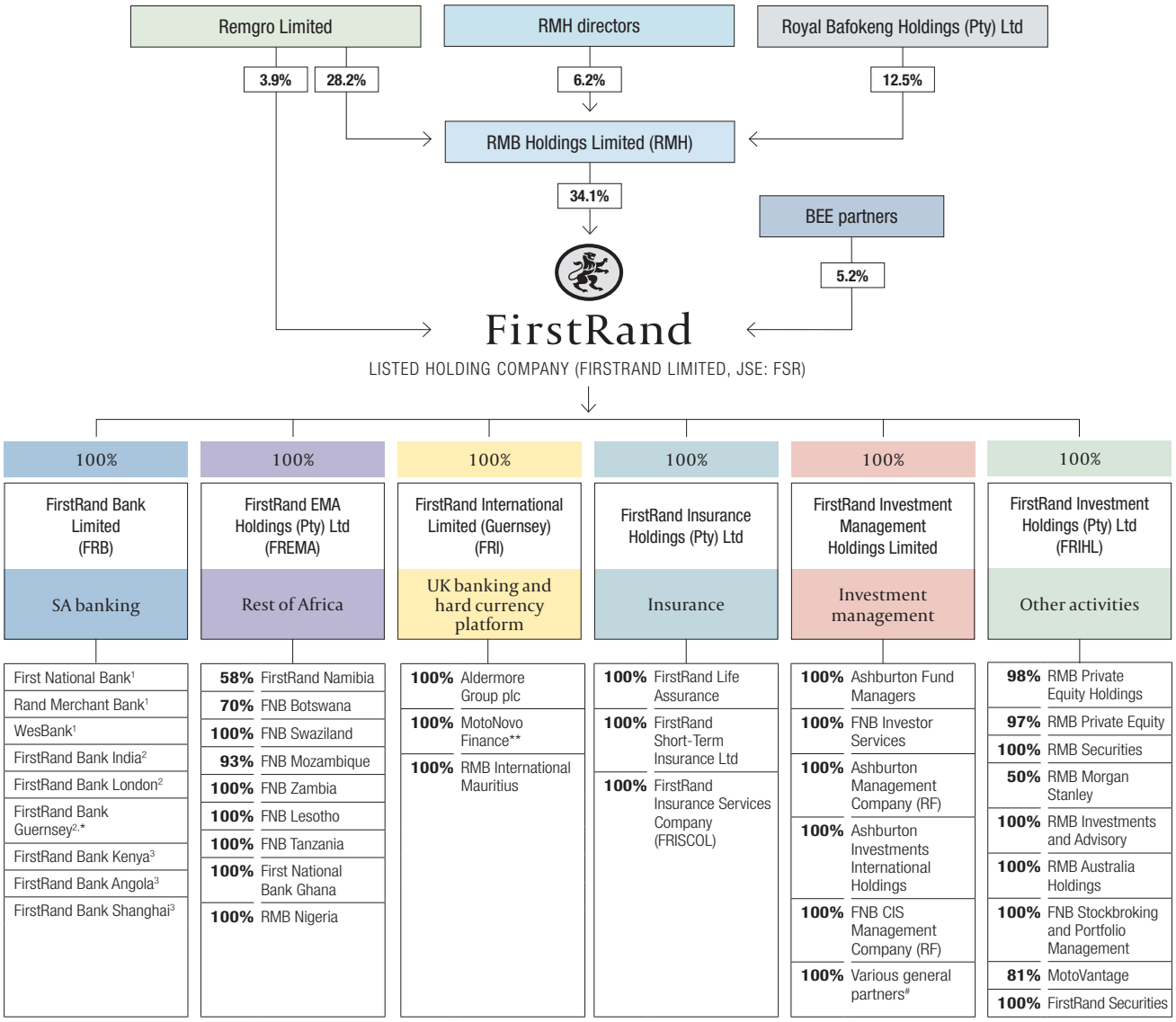
The table references used throughout the Pillar 3 disclosure are in accordance with the Pillar 3 standard, where required.

Some differences exist between the practices, approaches, processes and policies of FirstRand Bank Limited (the bank or FRB) and its fellow FirstRand wholly-owned subsidiaries. These are highlighted by reference to the appropriate entity, where necessary. This report has been internally verified through the group's governance processes, in line with the group's external communication and disclosure policy, which describes the responsibilities and duties of senior management and the board in the preparation and review of the Pillar 3 disclosure and aims to ensure that:

- minimum disclosure requirements of the Regulations, standards and directives are met;
- disclosed information is consistent with the manner in which the board assesses the group's risk portfolio;
- the disclosure provides a true reflection of the group's financial condition and risk profile; and
- the quantitative and qualitative disclosures are appropriately reviewed.

In this regard, the board and senior management have ensured that appropriate review of the relevant disclosures have taken place. The review process applied was presented to the FirstRand risk, capital management and compliance (RCC) committee. The board is satisfied that the Pillar 3 disclosures have been prepared in line with the FirstRand external communication and disclosure policy, that appropriate internal control processes and review have been applied, and that the Pillar 3 disclosure complies with the relevant disclosure requirements.

SIMPLIFIED GROUP AND SHAREHOLDING STRUCTURE



1. Division.

2. Branch.

3. Representative office.

DirectAxis is a business unit of FirstRand Bank Limited.

** Trading as FNB Channel Islands.*

*** Wholly-owned subsidiary of Aldermore Group plc.*

 # Ashburton Investments has a number of general partners for fund seeding purposes. All of these entities fall under FirstRand Investment Management Holdings Limited.

Structure shows effective consolidated shareholding

For segmental analysis purposes entities included in FRIHL, FREMA, FRI, FirstRand Investment Management Holdings Limited and FirstRand Insurance Holdings (Pty) Ltd are reported as part of the results of the managing business (i.e. FNB, RMB, WesBank or FCC). The group's securitisations and conduits are in FRIHL, FRI and FRB.

Group strategy

FirstRand's strategy accommodates a broad set of growth opportunities across the entire financial services universe from a product, market, segment and geographic perspective. Its ambition is to deliver a fully integrated financial services value proposition across its regional portfolio, built on a customer-centric focus and underpinned by leading digital platforms and capabilities. In the UK the group aims to build further franchise value through scaling, digitisation and disruption.

Group earnings remain significantly tilted towards South Africa and are mainly generated by FirstRand's large lending and transactional franchises, which have resulted in deep and loyal customer bases. Many of the expected competitive and regulatory pressures will, however, target these traditional banking operations, particularly the transactional activities, and the group remains focused on protecting this large and profitable revenue stream.

At the same time, FirstRand is working hard to find other sources of capital-light revenues, and its strategy to deliver integrated financial services to the group's customers in South Africa is gaining traction. This approach, which is underpinned by the disciplined allocation of financial resources and enabled by efficient digital platforms, allows FirstRand to better optimise the franchise value of its domestic portfolio.

The group's strategy outside of South Africa includes growing its presence and offerings in certain key markets in the rest of Africa, where it believes it can organically build competitive advantage and scale over time.

In the UK, the integration of MotoNovo with Aldermore was completed in May 2019, and the business is now focused on scaling its existing offerings and unlocking synergies between MotoNovo and Aldermore. The group's financial resource management methodology has also been introduced with the objective to optimise capital and funding deployment for growth in economic profits and sustainable returns.

BUSINESS ACTIVITIES AND RESULTANT RISKS

The group's strategy is executed through its portfolio of operating businesses within frameworks set by the group.

	FNB	RMB	WesBank	Aldermore	Ashburton Investments	FCC
Key activities	**Retail and commercial banking, insurance, and wealth and investment management**	**Corporate and investment banking**	**Instalment finance and short-term insurance (VAPS*)**	**Asset and invoice finance, commercial and residential mortgages, vehicle asset finance and deposit taking**	**Asset management**	**Group-wide functions**
Market segments	→ Consumer → Small business → Agricultural → Medium corporate → Public sector	→ Financial institutions → Large corporates → Public sector	→ Retail, commercial and corporate	→ Retail and commercial	→ Retail and institutional	→ Institutional (and internal/ intragroup)
Products and services	→ Transactional → Deposit taking → Mortgage and personal loans → Credit and debit cards → Investment products → Insurance products (funeral, risk, credit life) → Card acquiring → Credit facilities → Connect (MVNO**) → Wealth and investment management	→ Advisory → Structured finance → Markets and structuring → Transactional banking → Deposit taking → Principal investing solutions and private equity	→ Asset-based finance → Full maintenance leasing → Personal loans → VAPS (short-term insurance)	→ Asset finance → Invoice finance → Commercial, buy-to-let and residential mortgages → Vehicle asset finance (MotoNovo) → Deposits	→ Traditional and alternative investment solutions	→ Group asset/ liability management → Funding and liquidity management → Funding instruments → Capital management → Capital issuance → Foreign exchange management → Tax risk management
Risks#	Retail and commercial credit risk	Corporate and counterparty credit risk	Retail, commercial and corporate credit risk	Retail and commercial credit risk		Interest rate risk in the banking book
	Insurance risk	Traded market risk		Interest rate risk in the banking book		Funding and liquidity risk
				Funding and liquidity risk		Structural foreign exchange risk
	Equity investment risk					
	Operational risk					
Other risks	Strategic, business, reputational, model, environmental and social, tax, regulatory and conduct risks					

* *Value-added products and services.*

** *Mobile virtual network operator.*

Risk profile

The following table provides a high-level overview of the group's risk profile in relation to its quantitative return and risk appetite measures.

	YEAR ENDED 30 JUNE 2019	RETURN AND RISK APPETITE – QUANTITATIVE MEASURES	YEAR UNDER REVIEW
GROWTH AND RETURNS	**Normalised ROE** **22.8%** 2018: 23.0%	**Normalised ROE** Long-term target **18% – 22%**	The quality of FirstRand's operating businesses' growth strategies and the disciplined allocation of financial resources have over time enabled the group to deliver on its earnings growth and return targets. The *CFO's report* in the FirstRand annual integrated report provides an overview of the group's financial position and performance for the year ended 30 June 2019.
	Normalised earnings growth **6%** 2018: 8%	**Normalised earnings growth** Long-term target **Nominal GDP plus >0% – 3%**	
SOLVENCY	**Capital adequacy** **15.2%** 2018: 14.7%	**Capital adequacy** Target **>14%**	The Common Equity Tier 1 (CET1) ratio strengthened to 12.1% at 30 June 2019 and exceeded the group's internal target. The group continues to actively manage its capital stack, and to this end issued R5 billion of Additional Tier 1 (AT1) instruments and R2.6 billion of Tier 2 instruments in the domestic market. This resulted in an efficient capital structure, which is closely aligned with the group's internal targets. The Basel III leverage ratio is a supplementary measure to the risk-based capital ratios, and is a function of the Tier 1 capital measure, and total on- and off-balance sheet exposures. The group's leverage ratio exceeded its internal targets.
	Tier 1 **12.9%** 2018: 12.1%	**Tier 1** Target **>12%**	
	CET1 **12.1%** 2018: 11.5%	**CET1** Target **10% – 11%**	
	Leverage **7.5%** 2018: 7.1%	**Leverage** Target **>5.5%**	

Note: Capital and leverage ratios include unappropriated profits and the Day 1 transitional impact of IFRS 9.

LIQUIDITY	**LCR** **122%** 2018: 115%	**LCR** Minimum regulatory requirement: **100%** 2018: 90%	FirstRand continued to actively manage liquidity buffers through high-quality, highly liquid assets that are available as protection against unexpected liquidity stress events or market disruptions. As of 1 January 2019, the liquidity coverage ratio (LCR) requirement stepped up to the end-state minimum requirement of 100% from 90%. The group exceeded the minimum LCR with an average LCR of 122% over the quarter ended 30 June 2019. At 30 June 2019, the group's average available high-quality liquid assets (HQLA) holdings amounted to R249 billion.
	NSFR **118%** 2018: 112%	**NSFR** Minimum regulatory requirement: **100%**	The group exceeded the 100% minimum requirement with a net stable funding ratio (NSFR) of 118% at 30 June 2019.

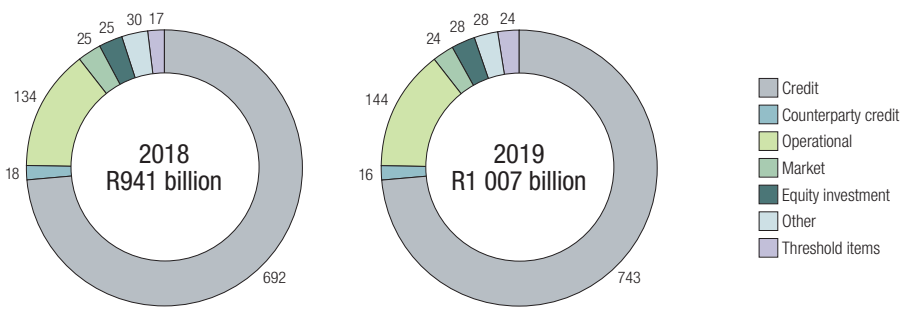
	YEAR ENDED 30 JUNE 2019	RETURN AND RISK APPETITE – QUANTITATIVE MEASURES	YEAR UNDER REVIEW
EXPOSURES PER RISK TYPE	**Credit risk**	**NPLs** **3.33%** 2018 (IAS 39): 2.36% 1 July 2018 (IFRS 9): 2.93% **Credit loss ratio** **88 bps** (including Aldermore) 2018: 84 bps* **99 bps** (excluding Aldermore) 2018: 90 bps* Long-run average **100 – 110 bps**	IFRS 9 contributed a material increase in NPLs mainly due to: → the lengthening of the write-off period from six to 12 months, particularly in unsecured; and → a more stringent definition for customer rehabilitation (technical cures). These IFRS 9-related changes, particularly the lengthening of the write-off period, accounted for more than half of the growth in NPLs. The underlying credit performance is captured under the operational NPLs definition. Taking into account the above context, total NPLs have increased 23% or R7 835 million since 1 July 2018, with operational NPLs increasing 14%. The increase in operational NPLs reflects strong book growth in certain unsecured portfolios, as well as macro pressures in some sectors affecting WesBank corporate, and drought-related impacts in FNB commercial's agric portfolio. This increase is within expectations and trend rate, given growth in underlying advances. The group's credit loss ratio of 99 bps (88 bps including Aldermore) increased 18% (excluding Aldermore) and remains below the group's through-the-cycle (TTC) range of 100 – 110 bps. Most of the group's lending books are trending in line with expectations.
	Market risk	**10-day expected tail loss** **R631 million** 2018: R464 million	The interest rate asset class represented the most significant traded market risk exposure at 30 June 2019. The group's market risk profile remained within risk appetite.
	Equity investment risk	**Equity investment carrying value as % of Tier 1** **9.6%** 2018: 11.7%	The 2019 financial year was characterised by significantly lower realisations relative to the prior year and R1.2 billion of new investments in the private equity portfolio. The quality of the investment portfolio remains acceptable and within risk appetite. The decrease in equity investment carrying value as a percentage of Tier 1 is due to a higher Tier 1 balance at 30 June 2019. The unrealised value in the portfolio at 30 June 2019 was R3.5 billion (2018: R3.7 billion).
	Interest rate risk in the banking book	**Net interest income sensitivity** **Down 200 bps** **-R4.4 billion** 2018: -R3.4 billion **Up 200 bps** **R3.5 billion** 2018: R3.1 billion	Assuming no change in the balance sheet nor any management action in response to interest rate movements, an instantaneous, sustained parallel 200 bps decrease in interest rates would result in a reduction in projected 12-month net interest income (NII) of R4.4 billion. A similar increase in interest rates would result in an increase in projected 12-month NII of R3.5 billion. The group's average endowment book was R240 billion (excluding Aldermore) for the year.

* *IAS 39 basis.*

The group's RWA distribution shows that credit risk remains the most significant contributor to the group's overall risk profile, and is depicted in the charts below.

RWA ANALYSIS

R billion



Current and emerging challenges and opportunities

Identifying and monitoring challenges emerging in the wider operating environment and risk landscape domestically, in the rest of Africa and the UK, are integral to the group's risk management approach. Challenges in the global environment are also monitored to identify possible impacts on the group's operating environment.

These challenges and associated risks are continuously identified and potential impacts determined, reported to and debated by appropriate risk committees and management.

POLITICAL AND MACROECONOMIC ENVIRONMENT

Political and social risk in South Africa is increasing, exacerbated by scarcity of skill, youth unemployment, lack of new economic activity and challenges in the delivery of electricity, water and sanitation.

The macroeconomic environments in many of the jurisdictions in which the group operates remained challenging in the year to June 2019. Global growth began to slow and downside risks emerged, which, combined with low developed market inflation generally and US inflation specifically, led the US Federal Reserve to signal monetary policy easing to support the economy. These conditions in turn prompted other developed market central banks to halt their planned monetary policy tightening cycles and signal monetary policy easing to cushion their economies into the growth slowdown. Whilst the adjustment of monetary policy expectations provided some support to emerging market assets, this was, to some extent, offset by the increased risks to the global growth outlook.

In South Africa, the government continued to make some progress with implementing governance and institutional reforms, although this did not translate into an improvement in economic conditions. The real economy remained weak on account of high government indebtedness, ongoing inefficiencies in the large state-owned enterprises (SOEs) and a lack of government capacity, combined with low private sector confidence and investment. Electricity supply interruptions and the global slowdown placed additional pressure on real GDP growth, which remained below one per cent. These conditions in turn placed significant and sustained pressure on both household and corporate income.

In the rest of the sub-Saharan Africa region, macroeconomic conditions remained relatively stable with a few important exceptions, namely Namibia, eSwatini and Zambia, where the operating environments remained tough. Botswana continued to steadily implement its structural economic reform programme, with the government having sufficient fiscal capacity to gradually lift investment in key sectors. The Nigerian economy continued to recover from its recession.

In the UK, the macro narrative continued to be dominated by the protracted Brexit uncertainty. Although this has weighed somewhat on UK economic activity, the unemployment rate remained low and wages stable. This allowed consumer demand and house prices to hold up reasonably well, placing the economy in a resilient position to deal with the impact of Brexit.

FINANCIAL RISKS

CURRENT AND EMERGING CHALLENGES	OPPORTUNITIES AND RISK MANAGEMENT FOCUS AREAS
Funding, liquidity and capital	
→ The current environment of increasing cost and scarcity of financial resources, and potential for global financial market volatility, poses risks for FirstRand's funding, liquidity and capital profile. → The PA regulatory minimum capital requirements, which include buffer add-ons for domestic systemically important banks (D-SIB), the countercyclical buffer (CCyB) and the capital conservation requirements, are incorporated in the targets set for the group. Regulatory reforms, including proposed Basel III reforms, may pose further risks for required capital levels.	→ The group continues to focus on growing its deposit franchise through innovative products, as well as to focus on improving the risk profile of its institutional funding. → FirstRand continued to exceed internal capital targets with ongoing focus on optimising the capital stack and RWA. → The impact of the proposed regulatory reforms continues to be assessed and incorporated into the group's capital planning.
Credit and counterparty credit risk	
→ Credit risk remains high due to a macroeconomic environment characterised by low economic growth, structural constraints, high structural unemployment, and rising income and wealth disparities. → Credit and counterparty credit risks are impacted by the sovereign rating, policy uncertainty and financial distress of several large SOEs. → Consumers are expected to experience increased strain due to prolonged periods of muted economic growth. → The impact of climate risk on the group's lending book and pressure on the agricultural sector increase default risk for climate-sensitive areas. → Client risk due to breakdowns in clients' governance processes and fraud are difficult to detect and manage through the credit process.	→ Despite challenging economic conditions, the group is benefiting from prudent risk mitigation measures in place. → Developments in the corporate and public sector are closely monitored and managed. → The group reviews risk appetite and credit origination strategies on an ongoing basis. → Sovereign rating actions are also monitored, together with the ratings of associated entities, with proactive revisions, where required. → Continued focus on validation and refinement of IFRS 9 models (which came into effect on 1 July 2018). → The group is finalising the implementation of regulatory requirements with regards to the standardised approach for counterparty credit risk (SA-CCR).
Traded market risk	
→ The market risk environment continues to be affected by economic conditions and the political environment, which impact exchange rates, interest rates, and equity and commodity prices. → The group's overall diversified levels of market risk increased over the year, although they still remain within limits. There were no significant concentrations in the portfolio. → Impending changes to the regulatory environment, outlined in the BCBS document, *Fundamental review of the trading book,* will impact banks' operating platforms.	→ The group is reviewing and adapting the current operating platform for market risk activities, including platform capabilities across both front office and risk management areas, and aligning market risk processes, analyses and reporting in line with changes in regulatory requirements. → The BCBS document, *Fundamental review of the trading book,* remains a priority and the group continues to work with both regulators and the banking industry to understand, draft and implement these regulations.
Interest rate risk in the banking book (IRRBB) and structural foreign exchange risk	
→ The South African Reserve Bank (SARB) increased interest rates by 25 bps in November 2018, followed by a 25 bps decrease in July 2019. → Inflation remains at relatively low levels and continues to be actively monitored.	→ The group is addressing the new BCBS requirements for IRRBB. → The endowment portfolio is actively managed. → The group monitors its net open foreign currency position against limits, assesses and reviews foreign exchange exposures and continues to focus on enhancing the quality and frequency of reporting.

NON-FINANCIAL RISKS

CURRENT AND EMERGING CHALLENGES	OPPORTUNITIES AND RISK MANAGEMENT FOCUS AREAS
Operational, IT and information governance risk	
→ Operational risk is driven by the complex IT environment; the growing sophistication of cybercrime; the interplay between cyber risk, fraud and the effect on reputational risk; operational challenges in meeting various new regulatory requirements across multiple jurisdictions; the risk of process breakdowns in manually intensive process environments; industry-wide payments risk and organisational change. → The impact of external factors on business operations, such as disruptive protest actions and the threat of electricity supply interruptions, pose a risk to operations and require management to continuously review contingency plans to ensure minimal business disruption. → Increased business digitisation (including robotics, artificial intelligence and cloud computing) introduces additional risks due to the demand and speed of digital technology adoption, which the group must be in a position to speedily identify and mitigate. → Global demand for critical IT resources across industries poses a challenge to attracting and retaining the best IT skills. → Key vendor dependency and possible undesirable conduct of vendors may increase reputational risk and require management to monitor vendor interaction more rigorously.	→ Continue to address possible control weaknesses, ongoing improvements in system security, IT risk processes and operational business resilience capability. → Efforts to improve staff and customer awareness of cybercrime and information security are ongoing. → Develop an integrated group cybercrime strategy and cyber incident response planning and testing. → Continue to improve risk data management, aggregation and reporting. → Align IT risk management practices with changing business models and technological landscape. → Enhance vendor risk management processes throughout the vendor life cycle. → Improve information management capabilities and the control environment, and roll out awareness programmes on records management, data quality and data privacy management.
Regulatory and conduct risk	
→ Regulatory and conduct risk management is impacted by the changing regulatory landscape and the ongoing introduction of new and/or amended legislation and related regulatory instruments, which places pressure on resources which could impact profitability over the medium to long term. → Heightened scrutiny and monitoring by regulators and other stakeholders on regulatory compliance and ethical conduct.	→ Continue to make significant investments in people, systems and processes to manage risks emanating from the large number of new and amended local and international regulatory requirements, market conduct reforms, data privacy and financial crime legislation. → Focus on monitoring the risk culture with clear prevention and remediation frameworks. → Develop conduct risk programmes that are focused on defining key business metrics and materiality thresholds which are sufficiently noteworthy for board-level reporting. Undertake review exercises to evaluate internal practices against best practice recommendations in the Australian Royal Commission report. Undertake product and pricing and remuneration model reviews.

Risk management approach

FirstRand believes that effective risk, performance and financial resource management is key to its success and underpins the delivery of sustainable returns to shareholders. These disciplines are, therefore, deeply embedded in the group's tactical and strategic decision-making.

The group believes a strong balance sheet and resilient earnings streams are key to growth, particularly during periods of uncertainty. FirstRand's businesses have consistently executed on a set of strategies which are aligned to certain group financial strategies and frameworks designed to ensure earnings resilience and growth, balance sheet strength, an appropriate risk/return profile and an acceptable level of earnings volatility under adverse conditions. These deliverables are underpinned by frameworks set at the centre to ensure financial discipline. These frameworks include:

RISK MANAGEMENT FRAMEWORK	PERFORMANCE MANAGEMENT FRAMEWORK	RISK/RETURN AND FINANCIAL RESOURCE MANAGEMENT FRAMEWORKS
Key principles: → ensure material risks are identified, measured, monitored, mitigated and reported; → assess impact of the cycle on the group's portfolio; → understand and price appropriately for risk; and → originate within cycle-appropriate risk appetite and volatility parameters.	**Key principles:** → allocate capital appropriately; → ensure an efficient capital structure with appropriate/conservative gearing; and → ensure economic value creation, which is measured as net income after capital charge (NIACC), the group's key performance measure.	**Key principles:** → execute sustainable funding and liquidity strategies; → protect credit ratings; → preserve a "fortress" balance sheet that can sustain shocks through the cycle; and → ensure the group remains appropriately capitalised.

The group defines risk widely. It is any factor that, if not adequately assessed, monitored and managed, may prevent it from achieving its business objectives or result in adverse outcomes, including reputational damage.

Risk taking is an essential part of the group's business and the group explicitly recognises core risk competencies as necessary and important differentiators in the competitive environment in which it operates. These core risk competencies include identifying, assessing, monitoring and managing risk, and are integrated in all management functions and business areas across the group.

The risk management process provides the checks and balances necessary to ensure sustainability and performance, create opportunity, achieve desired objectives, and avoid adverse outcomes and reputational damage.

A business profits from taking risks but will only generate an acceptable profit commensurate with the risk associated with its activities if these risks are properly managed and controlled. The group's aim is not to eliminate risk, but to achieve an appropriate balance between risk and reward. This balance is achieved by controlling risk at the level of individual exposures, at portfolio level, and across all risk types and businesses through the application of the risk/return framework. The group's risk/return framework enables organisational decision-making and is aligned with FirstRand's strategic objectives. Refer to page 23 for more on the group's risk/return framework.

The following table illustrates the core competencies that form part of the group's risk management processes across key risk types and components.

CORE RISK COMPETENCIES AND KEY RISKS

CORE COMPETENCIES	RISK TYPES	RISK COMPONENTS
Identification	Funding and liquidity risk	→ Funding liquidity risk → Market liquidity risk
	Credit risk	→ Pre-settlement risk → Country risk → Credit default risk → Concentration risk → Securitisation risk
	Counterparty credit risk	→ Counterparty credit risk
Assessment	Traded market risk	→ Interest rate risk in the trading book → Traded equity and credit risk → Foreign exchange risk → Commodity risk
	Non-traded market risk	→ Interest rate risk in the banking book → Structural foreign exchange risk
	Equity investment risk	→ Price risk → Equity investment liquidity risk
Monitoring	Operational risk	→ Internal and external fraud → People risk → Information technology risk → Information risk → Legal risk → Business resilience risk → Process risk
	Other risks	→ Strategic risk → Business risk: – Volume and margin changes – Expansion activities → Reputational risk → Model risk → Insurance risk → Environmental and social risk → Regulatory and conduct risk → Tax risk
Management		

Risk limits established across risk types are an integral part of managing risk and are instrumental in constraining risk taking within risk appetite. The risks, and the roles and the responsibilities of each stakeholder in business, support and the various control functions in the management of these risks, are described in the group's business performance and risk management framework (BPRMF).

Risk governance

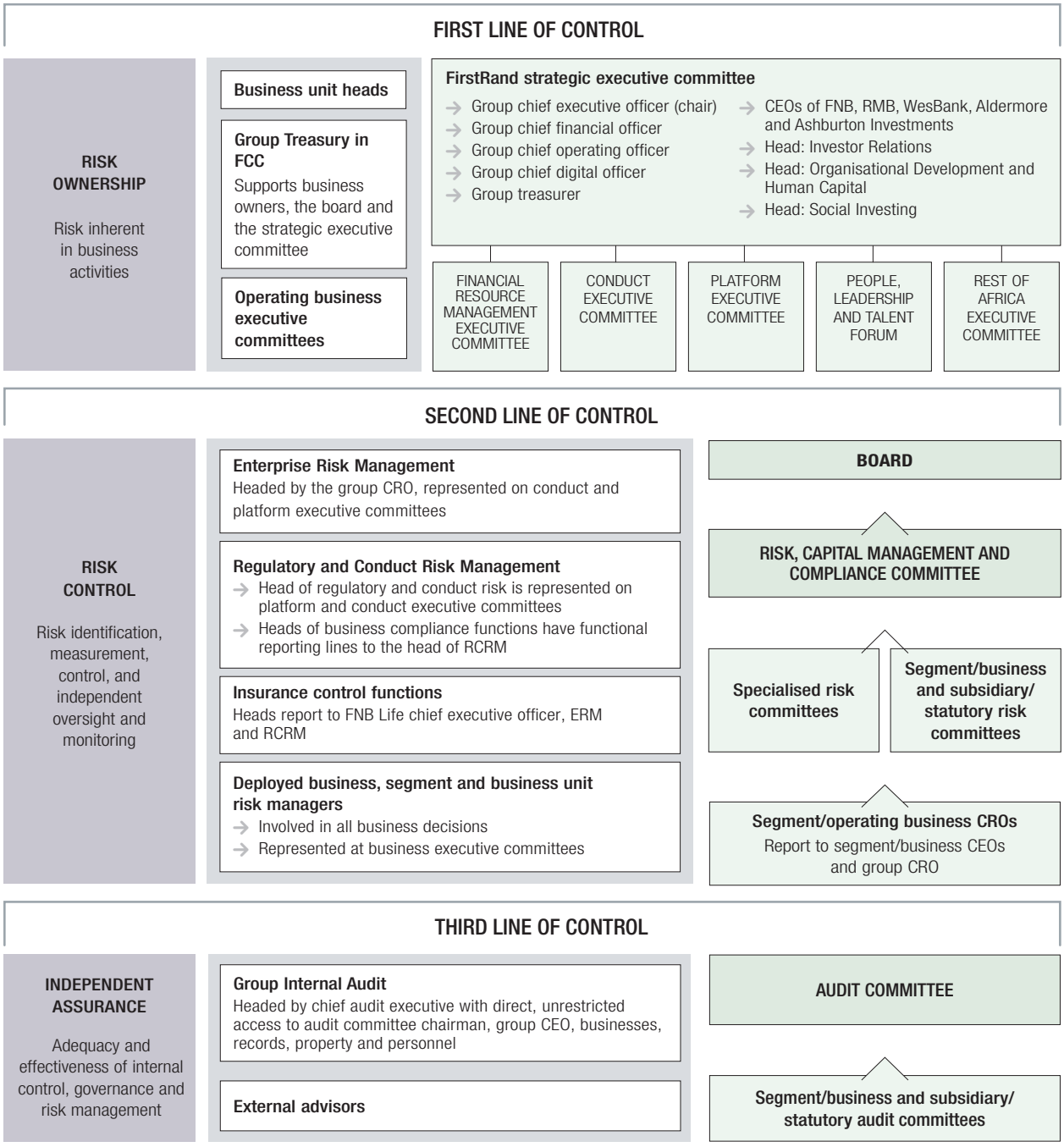
The group believes that effective risk management is supported by effective governance structures, robust policy frameworks and a risk-focused culture. Strong governance structures and policy frameworks foster the embedding of risk considerations in business processes and ensure that consistent standards exist across the group. In line with the group's corporate governance framework, the board retains ultimate responsibility for providing strategic direction, approving risk appetite and ensuring that risks are adequately identified, measured, monitored, managed and reported on.

RISK GOVERNANCE FRAMEWORK

The group's BPRMF describes the group's risk management structure and approach to risk management. Effective risk management requires multiple points of control or safeguards that should consistently be applied at various levels throughout the organisation. There are three lines of control across the group's operations, which are recognised in the BPRMF along with the business functions, committee structures and risk universe as illustrated in the diagram below.

Aldermore employs the three lines of control model in managing its risks in line with the FirstRand model. Its risk and governance committees report to the group's risk and governance committees. Aldermore's executive committee reports to the Aldermore board.

LINES OF RISK CONTROL



RISK GOVERNANCE STRUCTURE

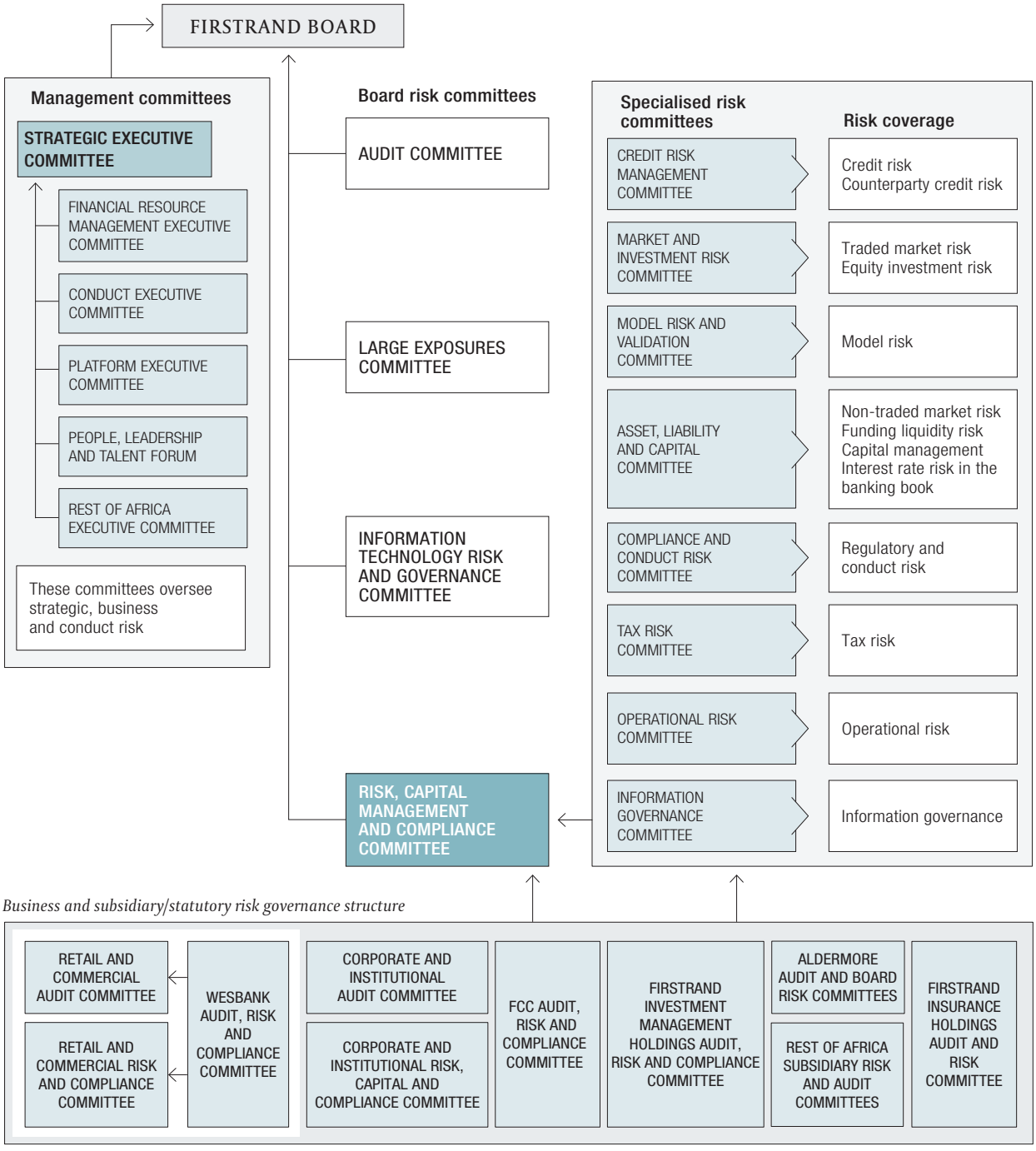
The risk management structure is set out in the group's BPRMF. As a policy of the board, the BPRMF delineates the roles and responsibilities of key stakeholders in business, support and control functions across the group.

The primary board committee overseeing risk matters across the group is the FirstRand RCC committee. It has delegated responsibility for a number of specialist topics to various subcommittees. Further detail on the roles and responsibilities of the RCC committee and its subcommittees relating to each risk type is provided in the major risk sections of this report.

Additional risk, audit and compliance committees exist in the operating businesses, segments and subsidiaries, the governance structures of which align closely with that of the group, as illustrated in the risk governance structure diagram. Changes to the group's internal operating model to execute on the group's integrated financial services strategy resulted in the creation of the Retail and Commercial segment committees to replace the FNB committees, and the Corporate and Institutional segment committees to replace the RMB committees. The Aldermore audit and board risk committees are integrated into the group's governance structure. The segment audit, risk and compliance committees support the board risk committees and RCC subcommittees in the third line of control. The diagram on the next page illustrates how the risk committees fit into the board committee structure and the risk coverage of each committee.

Other board committees also exist, with clearly defined responsibilities. The group board committees comprise members of business advisory boards, audit and risk committees to ensure a common understanding of the challenges businesses face and how these are addressed across the group. The strategic executive committee ensures alignment of business strategies, implements the risk/return framework and is responsible for optimal deployment of the group's resources.

RISK GOVERNANCE STRUCTURE



BOARD RISK COMMITTEES' RESPONSIBILITIES

COMMITTEE	RESPONSIBILITY
Audit committee	→ assists the board with its duties relating to the safeguarding of assets, the operation of adequate systems and controls, assessment of going concern status and ensuring that relevant compliance and risk management processes are in place; → oversees and reviews work performed by the external auditors and internal audit function; and → oversees financial risks and internal financial controls, including the integrity, accuracy and completeness of the financial information and annual integrated report, which is provided to shareholders and other stakeholders.
Risk, capital management and compliance committee	→ approves risk management policies, frameworks, strategies and processes; → monitors containment of risk exposures within the risk/return framework; → reports on assessment of the adequacy and effectiveness of risk appetite, risk management, the group's internal capital adequacy assessment process (ICAAP) and compliance processes to the board; → monitors the implementation of the risk management strategy, risk appetite limits and effectiveness of risk management; → initiates and monitors corrective action, where appropriate; → monitors that the group takes appropriate action to manage its regulatory and supervisory risks, and complies with applicable laws, rules, codes and standards; → approves regulatory capital models, risk and capital targets, limits and thresholds; and → monitors capital adequacy and ensures that a sound capital management process exists.
Large exposures committee (LEC)	→ reviews and approves applications and/or renewals for investments, advances or other credit instruments in excess of 10% of the group's qualifying capital and reserves; → reviews and approves transactions with a related party and the write-off of any related-party exposure exceeding 1% of the group's qualifying CET1 capital and reserve funds; → reviews and approves applications and renewals outside the mandate of the FirstRand wholesale credit approval committee; and → delegates the mandate for approval of group and individual facilities to the FirstRand wholesale credit approval committee and the FirstRand commercial credit approval committee, as appropriate.
Information technology risk and governance committee	→ oversees the appropriateness and effectiveness of implementation and oversight of IT risk and governance management across the group; → reviews and approves the IT governance framework; → proposes to the board and approves, where appropriate, risk and governance policies, standards, procedures and practices in respect of IT risk and security; → reviews reports from the businesses on the effectiveness of IT operations and risk management across the group prior to presentation to the board; → reviews reports on significant incidents and process breakdowns in the execution of IT risk control policies and processes; → monitors implementation of IT strategies and key IT projects across businesses; → monitors business resilience and that adequate corrective actions have been implemented, and reports such incidents and process breakdowns to the board; and → monitors the quality of IT risk processes, including but not limited to audits of implementation of the IT governance framework and BCBS 239.

SUBCOMMITTEES OF THE RCC COMMITTEE RESPONSIBILITIES

RCC SUBCOMMITTEE	RESPONSIBILITY
Credit risk management committee	→ approves credit risk management and risk appetite policies as well as forward-looking credit risk indicators developed by retail, commercial and corporate portfolio management; → monitors the credit risk profile including performance relative to credit risk appetite thresholds, quality of the in-force business and business origination in terms of the group's view of credit economic outlook; → monitors scenario and sensitivity analysis, stress tests, credit economic capital utilisation, credit pricing and credit concentrations; → ensures uniform interpretation of credit regulatory requirements and credit reporting; and → monitors corrective actions, where appropriate.
Market and investment risk committee	→ approves market and investment risk management frameworks, policies, standards and processes; → monitors the market and investment risk profile and the effectiveness of market and investment risk management processes; → monitors implementation of corrective action, where required; and → approves market and investment risk-related limits.
Model risk and validation committee	→ considers and approves all material aspects of model governance and validation processes, including but not limited to those processes related to credit risk rating and estimation processes, internal models for market risk and advance measurement operational risk models.
Asset, liability and capital committee (ALCCO)	→ approves and monitors effectiveness of management policies, assumptions, limits and processes for liquidity and funding risk, capital and non-traded market risk; → monitors the group's funding management; → monitors capital management including level, composition, supply and demand of capital, and capital adequacy ratios; and → approves frameworks and policies relating to internal funds transfer pricing for the group.
Compliance and conduct risk committee	→ approves regulatory and conduct risk management frameworks, anti-money laundering and combating the financing of terrorism (AML/CFT) including anti-bribery and corruption, minimum policies, standards and monitoring plans; → monitors, evaluates and assesses effectiveness of regulatory and conduct risk management across the group; → monitors compliance with the Regulations and supervisory requirements relating to banks; and → reviews regulatory compliance matters relating to financial crime, market conduct, prudential regulations, anti-bribery and corruption.
Tax risk committee	→ sets tax strategy and tax risk appetite; → approves tax risk management frameworks and policies; → monitors tax risk assessments and risk profiles; and → escalates relevant risk items to the RCC committee.
Operational risk committee	→ provides governance, oversight and coordination of relevant operational risk management practices, and initiates corrective action, where required; → recommends the group's operational risk appetite for approval by the RCC committee; → monitors the group, subcommittee and business risk profiles against operational risk appetite; and → approves operational risk management framework and all its subpolicies/frameworks, including fraud risk, legal risk, business resilience and physical security.
Information governance committee	→ monitors the development and implementation of an appropriate information governance framework (including policies, standards and guidelines) and recommends the framework for approval at the RCC committee; → reports to the RCC committee on the level of information governance for the group; → initiates such actions and issuing of instructions as may be appropriate, in order to improve group information governance; and → monitors development and implementation of the group data strategy and provides feedback to the RCC committee on implementation status.

COMBINED ASSURANCE

The audit committee oversees formal enterprise-wide governance structures for enhancing the practice of combined assurance at group and business levels. The primary objective is for the assurance providers to work together with management to deliver the appropriate assurance cost-effectively. Assurance providers in this model include Group Internal Audit (GIA), senior management, Enterprise Risk Management (ERM), Regulatory and Conduct Risk Management (RCRM) and external auditors. The combined outcome of independent oversight, validation and audit tasks performed by the assurance providers ensure a high standard across methodologies, and operational and process components of the group's risk and financial resource management functions.

The group established a combined assurance forum, supported by business combined assurance forums, with the primary objective to assist the audit committee in discharging its responsibilities on the integration, coordination and alignment of the various risk management and assurance processes and activities across the group. Combined assurance is firmly embedded in the organisation and drives consistent reporting to relevant governance committees.

Combined assurance results in a more efficient assurance process through the reduction of duplication, more focused risk-based assurance against key risk themes and control areas, and heightened awareness of emerging issues, resulting in the implementation of robust, collaborative and appropriate preventative and corrective action plans.

RISK INFORMATION REPORTING

Process of risk reporting

The group's robust and transparent risk-reporting process enables key stakeholders (including the board and the strategic executive committee) to get an accurate, complete and reliable view of the group's financial and non-financial risk profile and enables management to make appropriate strategic and business decisions.

Reporting of risk information follows the governance structure illustrated on page 15. Specialised risk committees and business audit, risk and compliance committees report to the RCC committee and its subcommittees, as well as to relevant executive committees on risk profile, material risk exposures, risk-adjusted business performance and key risk issues. The RCC committee submits its reports and findings to the board, and highlights control issues to the audit committee.

Regular risk reporting enables the board, senior management, RCC committee and relevant subcommittees to evaluate and understand the level and trend of material risk exposures and the impact on the group's capital position, and to make timely adjustments to the group's future capital requirements and strategic plans.

The RCC committee, in turn, submits reports to the board on:

- the group's risk profile, significant issues, key risk exposures, risk rating trends, board risk appetite principles and board risk limits;
- effectiveness of processes on corporate governance, risk management, capital management and capital adequacy;
- level of compliance or non-compliance with laws and regulations, and supervisory requirements;
- internal control and regulatory material malfunction;
- contravention of codes of conduct or ethics, personal trading, or unethical behaviour by any director; and
- limits, authorities and delegations granted to the RCC committee.

GIA provides a written assessment on the adequacy and effectiveness of the system of internal controls (including financial controls) and risk management to the audit committee. This enables the board to report on the effectiveness of the system of internal controls in the annual integrated report.

Scope and content of risk reporting

Risk reports to the board, board risk committees, business risk and audit committees, and senior management include the following:

- risk exposure and risk-adjusted business performance;
- feedback on implementation and monitoring of risk management processes;
- comparison of risk management performance against risk appetite, limits and indicators;
- periodical review of process against and deviation from the risk management plan;
- changes in external and internal environment and their possible impact on the group's risk profile;
- the impact of environmental changes on the strategic risk profile of the group;
- assessment of whether risk responses are effective and efficient in both design and operation;
- tracking of implementation of risk responses;
- analysis and lessons learnt from changes, trends, successes, failures and events; and
- identification of emerging risks.

As part of the reporting, interrogation and control processes, ERM drives the implementation of more sophisticated risk assessment methodologies through the design of appropriate policies and processes, including the deployment of skilled risk management personnel in every business.

ERM ensures and GIA provides assurance that all pertinent risk information is accurately captured, evaluated and escalated appropriately and timeously. This enables the board and its designated committees to retain effective control over the group's risk position.

Risk data aggregation and risk reporting

The BCBS published BCBS 239 in January 2013. This paper presents a set of principles to strengthen banks' risk data aggregation capabilities and internal risk reporting practices. In turn, effective implementation of the principles is expected to enhance risk management and decision-making processes at banks. D-SIBs were required to comply with the principles by 1 January 2017.

Management recognises the need to comply, as well as the scope and complexity of remediation efforts. A strategic yet pragmatic approach has been adopted for implementation. Significant investment, commitment and notable progress has been made with the implementation of the principles, taking cognisance of the strategic data roadmap, supported by business IT strategies.

The involvement of GIA from the outset of the BCBS 239 programme, the development of the Banking Association of South Africa (BASA) audit guidelines and benchmarking the group's implementation approach against international best practice has improved the group's understanding of the principles.

Despite the challenges posed by the complexity, scope and scale of the requirements, the group remains committed to ensure implementation of the principles in line with the scope and timelines agreed with the PA. GIA is validating the group's compliance status on an ongoing basis.

RISK CULTURE

The group recognises that effective risk management requires an appropriate risk culture. The group distinguishes between corporate culture (how values are lived in the group) and risk culture (support for and attitudes towards risk management). Significant determinants are ethical leadership, flow of information, reporting integrity and customer focus.

The group's risk culture is intended to ensure effective risk management and controls. It places primary responsibility for risk management on the first line of control (risk ownership), while designating specific risk management-related duties and responsibilities to the second (risk control) and third (independent assurance) lines of risk control.

The group believes its risk culture is underpinned by the following:

- competent and ethical leadership in setting strategy, risk appetite and a positive attitude towards applying appropriate risk practices;
- robust risk governance structures to ensure risk policy frameworks are visible and implemented, and that appropriate committee structures and membership exist;
- best practice risk identification, measurement, monitoring, management and reporting; and
- a broader organisational culture which drives appropriate business ethics practices and supports risk management goals, and which provides a balance between skills and ethical values, and ensures accountability for performance.

In support of a sound risk culture, the group manages ethics and conduct risk programmes with appropriate levels of employee training and communication to ensure responsible conduct. The programmes include those aimed at overseeing client desirability and related reviews, managing whistle-blowing and other risk culture monitoring mechanisms, as well as reviewing the outcomes of various culture and behaviour assessments. The effectiveness of these programmes is periodically assessed.

The group has established clear parameters to assess its risk culture rating. This is outlined in the following diagram.

RISK CULTURE ASSESSMENT FRAMEWORK

THEMES			
→ Ethical and competent leadership → Accurate and timely flow of information with appropriate disclosure → Ethical treatment of clients and ethical clients			
PARAMETERS			
Tone from the top	**Setting risk goals**	**Providing resources and sound platforms**	**Aligning measurement and rewards**
ACTIVITIES			
→ Ensuring an ethical and competent leadership pipeline – recruitment, promotion and dismissal. → Developing management structures and forums that encourage openness. → Zero tolerance for unethical conduct or whistle-blower victimisation.	→ Ensuring risk management goals, policies and standards are set and communicated throughout the group. → Ensuring that ethics and accountability to risk management parameters are acknowledged to be as important as efficiency, innovation and profit.	→ Ensuring risk management goals are attainable by adequately staffing risk management functions. → Applying fit-and-proper tests for key risk roles. → Embedding risk controls in business platforms.	→ Ensuring accurate and relevant performance metrics. → Ensuring risk metrics are incorporated in the performance management framework.

Risk measurement approaches

The following approaches are adopted by the group for the calculation of RWA.

RISK TYPE	FRB SA (i.e. FRB excluding foreign branches)	PA APPROVAL DATE	REMAINING FIRSTRAND SUBSIDIARIES AND FRB FOREIGN BRANCHES
Credit risk	Advanced internal ratings-based (AIRB) approach and the standardised approach for certain portfolios	January 2008	Standardised approach
Securitisations	AIRB	January 2008	Standardised approach
Counterparty credit risk	Standardised method	May 2012	Current exposure method
Traded market risk	Internal model approach	July 2007	Standardised approach
Equity investment risk	Market-based approach: simple risk-weighted method*	June 2011	Market-based approach: simple risk-weighted method*
Operational risk	Advanced measurement approach (AMA)	January 2009	**Remaining subsidiaries and FRB foreign branches:** → The standardised approach for operational risk (TSA) **FRIHL entities:** → Basic indicator approach (BIA), TSA, AMA **Ashburton Investments:** → BIA **Aldermore:** → BIA
Other assets	Standardised approach	January 2008	Standardised approach

* *Subject to the threshold rules as per Regulation 38(5).*

CREDIT RISK

The calculation of credit RWA for the bank's domestic operations is based on internally developed quantitative models in line with the AIRB approach. The three credit risk measures, namely probability of default (PD), exposure at default (EAD), and loss given default (LGD) are used along with prescribed correlations, dependent on the asset class and estimates of maturity, where applicable, to derive credit RWA. The quantitative models also adhere to the AIRB requirements related to annual validation.

For the remaining entities, credit RWA is based on the standardised approach where regulatory risk weights are prescribed per asset class. Even though the remaining entities do not have regulatory approval to use the AIRB approach, internally developed quantitative models are used for internal assessment of credit risk.

SECURITISATIONS

Where a public rating is available by an eligible external credit assessment institution (ECAI) for the notes in issue, the ratings-based approach is used, otherwise the supervisory formula approach or a look-through to the underlying assets is applied. Capital calculated under these approaches is limited to the capital that would have been held had the assets remained on-balance sheet.

The ratings-based approach uses an external rating assigned to the securitisation tranches by an ECAI. Credit risk weightings are based on the rating assigned to the specific tranche as well as its seniority relative to other notes.

Under the supervisory formula approach, the capital requirement for any securitisation exposure is determined using the credit parameters for the underlying assets. Capital is determined using a standard formula taking into account the size of the tranche and credit enhancement. Unrated exposures are risk weighted at 1 250%. Capital for unrated exposures is determined using the size of the tranche and credit enhancement.

The standardised approach uses an external rating assigned to the securitisation tranches by an ECAI. Credit risk weightings are based on the rating assigned to the specific tranche.

COUNTERPARTY CREDIT RISK

Regulatory capital for counterparty credit risk is based on the credit risk approach, i.e. AIRB for domestic entities and the standardised approach for the remainder of the group's entities. In addition, capital is held for credit valuation adjustment (CVA) risk. CVA refers to the fair value adjustment to reflect counterparty credit risk in the valuation of derivative contracts. It is the mark-to-market adjustment required to account for credit quality deterioration experienced by a derivative counterparty. CVA capital, for all entities, both domestic and foreign, is computed in accordance with the standardised approach. For domestic entities, economic capital is calculated based on the internal model, with regulatory capital serving as a proxy for economic capital for the remainder of the group entities.

These three EAD approaches to measure the exposure of derivative transactions are based on current regulations and are outlined in the table below.

Current exposure method (CEM)	CEM is the simplest approach and is based on a replacement cost plus add-on formula dependent on potential future exposure that accounts for the potential change in the value of the contract until a hypothetical default of the counterparty. This method is applied to all group entities except for FRB SA.
Standardised method	The standardised method is applied for FRB SA. This method is more sophisticated than the CEM approach as it factors in the non-linearity features of derivatives, risk sensitivity such as PV01s and is based on the concept of hedging sets. EAD under the standardised method is quantified by scaling either the current credit exposure less collateral or the net potential future exposure by a factor of 1.4.
Internal model method	The internal model method is the third and most complex method and is not applied by the group.

TRADED MARKET RISK

Regulatory capital for domestic trading units is based on the internal Value-at-Risk (VaR) model supplemented with a stressed VaR (sVaR). Both VaR and sVaR is calculated at the 99%, 10-day actual holding period level using 250 scenarios each. VaR is calculated using the last 260 trading days' data and sVaR using 260 trading days during a pre-defined static stress period (2008/2009). For internal risk reporting purposes, an expected shortfall methodology calculated at a 99%, 10-day actual holding period is used over the same periods as VaR and sVaR. 1-day VaR calculations are also used as an additional tool in the assessment of market risk.

The group's subsidiaries in the rest of Africa and the bank's foreign branches are measured using the standardised approach for regulatory capital. Internal stress loss methodology applies to the rest of Africa for internal measurement of risk. Capital is calculated for general market risk using the duration methodology. In addition to general market risk, specific risk capital is held based on the Basel III standardised approach duration method.

EQUITY INVESTMENT RISK

The simple risk weighted method under the market-based approach (300% for listed equities or 400% for unlisted equities) is applied with the scalar for the quantification of RWA. In terms of Regulation 38, a specific risk weight is applied to qualifying investments in financial, banking and insurance entities (threshold rules). This is dependent on the size of the portfolio of the investments in relation to the group's qualifying CET1 capital. The full deduction method is applied to insurance entities i.e. deduction of IFRS consolidated net asset value (NAV) and risk weighting of investment into insurance entity. Economic and regulatory capital calculations are augmented by regular stress tests of market values and underlying drivers of valuations, including assessments of stress resulting from portfolio concentrations.

Where price discovery is reliable, the risk of listed equity investments is measured based on a 90-day expected tail loss (ETL) calculated using RMB's internal market risk model for the economic capital quantification. The ETL risk measure is supplemented by a measure of the specific (idiosyncratic) risk of the individual securities per the specific risk measurement methodology.

OPERATIONAL RISK

The group applies AMA for its domestic operations. Offshore subsidiaries and operations use TSA and all previously unregulated entities (prior to 2010) in FRIHL use BIA. Ashburton Investments and Aldermore also follow BIA. Under AMA, the group uses a sophisticated statistical model for the calculation of capital requirements, which enables more accurate, risk-based measures of capital for business units on this approach. Operational risk scenarios and internal loss data (operational risk measurement tools) are used as direct inputs into this model, while risk and control assessments, key risk indicators and external data are used to inform the operational risk scenario analysis process. TSA and BIA capital calculations are based on a multiplication factor applied to gross income, as specified by Basel and PA regulations. No risk-based information is used in these capital calculations and allocations.

OTHER ASSETS

The group applies the standardised approach to property, plant and equipment, accounts receivable and other assets. Deferred tax assets relating to temporary differences, and investment in financial, banking and insurance entities are also included under other assets, and are risk weighted at 250%, subject to the threshold requirements as per Regulation 38.

Risk mitigation

The group is exposed to a number of risks inherent in its operations and uses a range of techniques and strategies to actively mitigate these risks.

INTEREST RATE RISK IN THE BANKING BOOK

The internal funds transfer pricing process is used to transfer IRRBB from the operating businesses to Group Treasury. This process allows risk to be managed centrally and holistically in line with the group's macroeconomic outlook.

Group Treasury is mandated by the board to manage the group's IRRBB and operates within a set of risk limits aligned to the group's risk appetite. The exposures against these limits are monitored daily with oversight by FCC Risk Management and ALCCO.

The two key drivers of IRRBB, the endowment effect and the fixed-rate book, are managed by Group Treasury through balance sheet optimisation or the use of financial market instruments.

Fixed-rate book	Interest rate risk from the net fixed rate asset/liability position is managed to low levels with residual risk stemming from timing mismatches and basis risk.
Endowment effect	The endowment effect is the most significant driver of IRRBB and is a result of the use of large portfolios of low/non-rate liabilities to fund variable-rate assets. Consequently, the group's margins naturally expand in a rate-hiking cycle, but contract in a rate-cutting cycle. Group Treasury employs a combination of structural and tactical hedging strategies to manage the endowment effect. It actively monitors the macroeconomic environment to assess the stage of the cycle and hedges this risk from an earnings perspective. Only instruments for which a liquid market exists are used for hedging purposes and, where possible, hedge accounting is used to minimise accounting mismatches.

CREDIT RISK

Since taking and managing credit risk is core to its business, the group aims to optimise the amount of credit risk it takes to achieve its return objectives. Mitigation of credit risk is an important component of this, beginning with the structuring and approval of facilities for only those clients and within those parameters that fall within risk appetite.

Although in principle credit assessment focuses on the counterparty's ability to repay debt, credit mitigation instruments are used where appropriate to reduce the group's lending risk, resulting in security against the majority of exposures. These include financial or other collateral, netting agreements, guarantees or credit derivatives. The collateral types are driven by portfolio, product or counterparty type.

Credit risk mitigation (CRM) instruments

- Mortgage and instalment sale finance portfolios in FNB, WesBank, MotoNovo and Aldermore are secured by the underlying assets financed.
- FNB and Aldermore commercial credit exposures are secured by the assets of the small and medium enterprises (SMEs) counterparties, and commercial property finance deals are secured by the underlying property and associated cash flows.
- Structured facilities in RMB are secured as part of the structure through financial or other collateral, including guarantees, credit derivative instruments and assets.
- Counterparty credit risk in RMB is mitigated through the use of netting agreements and financial collateral.
- Personal loans, overdrafts and credit card exposures are generally unsecured or secured by guarantees and sureties.
- Working capital facilities in RMB corporate banking are secured and unsecured.

The group employs strict policies governing the valuation and management of collateral across all business areas. Collateral is managed internally to ensure that title is retained over collateral taken over the life of the transaction. Collateral is valued at inception of the credit agreement and subsequently where necessary through physical inspection or index valuation methods. For corporate and commercial counterparties, collateral is reassessed during the annual review of the counterparty's creditworthiness to ensure that proper title is retained. For mortgage portfolios, collateral is revalued on an ongoing basis using an index model, and physical inspection is performed at the beginning of the recovery process. For asset finance, the total security reflected represents only the realisation value estimates of the vehicles repossessed at the date of repossession. Where the repossession has not yet occurred, the realisation value of the vehicle is estimated using internal models and is included as part of total recoveries.

Concentrations in credit risk mitigation types, such as property, are monitored and managed at a product and segment level, in line with the requirements of the group credit risk appetite framework. Collateral is taken into account for capital calculation purposes through the determination of LGD. Collateral reduces LGD, and LGD levels are determined through statistical modelling techniques based on historical experience of the recovery processes.

COUNTERPARTY CREDIT RISK

The group uses various instruments to mitigate potential exposure to certain counterparties. These include financial or other collateral in line with common credit risk practices, as well as netting agreements, guarantees and credit derivatives. In addition, the group has set up a function to clear over-the-counter (OTC) derivatives centrally as part of risk mitigation.

The group uses International Swaps and Derivatives Association (ISDA) and International Securities Market Association (ISMA) agreements for netting derivative transactions and repurchase transactions, respectively. These master agreements as well as associated credit support annexes (CSA) set out internationally accepted valuation and default covenants, which are evaluated and applied daily, including daily margin calls based on the approved CSA thresholds.

The effectiveness of the hedges and mitigants in place are monitored by a combination of counterparty risk limits and market risk limits. The setting of these limits is in accordance with the wholesale credit risk framework and the market risk limit framework. The counterparty credit risk team in RMB Global Markets is the custodian of the policies that set collateral requirements for counterparties and portfolios. Business units are responsible for executing these policies and the RMB Business Resource Management desk is responsible for the overall management of the funding costs/benefits of the collateral. Client and portfolio exposures, concentrations and effectiveness of collateral and hedges are monitored on an ongoing basis via the relevant derivative risk committees and the quarterly derivative counterparty risk management committee in RMB.

Collateral, in the form of cash and/or cash equivalents, is the primary credit risk mitigant for counterparty credit risk. Collateral arises from margin arrangements, which are stipulated within netting agreements, and is also a function of providing market access to clients across certain business lines. The liquid nature of the collateral taken makes it effective as a mitigant in that its valuation, where applicable, is easily observable in the market and in that lower regulatory haircuts apply.

RISK INSURANCE

The group's insurance buying philosophy is to self-insure as much as is economically viable in line with its risk appetite and to only protect itself against catastrophic risks through the use of third-party insurers. The insurance programme includes, *inter alia*, cover for key insurable operational risk exposures, such as professional indemnity, directors' and officers' liability, crime, cyber liability, public and general liability, property, etc. The group does not consider insurance as a mitigant in the calculation of capital for operational risk purposes.

Risk appetite

Risk appetite is approved by the board. The group's return and risk appetite statement informs organisational decision-making and is integrated with FirstRand's strategic objectives. Business and strategic decisions are aligned to risk appetite measures to ensure these are met during a normal cyclical downturn. Constraints are also set for stressed conditions. At a business unit level, strategy and execution are influenced by the availability and price of financial resources, earnings volatility limits and required hurdle rates and targets.

RETURN AND RISK APPETITE STATEMENT

FirstRand's risk appetite is the aggregate level and the type of risks the group is willing and able to accept within its overall risk capacity, and is captured by a number of qualitative principles and quantitative measures.

The risk/return framework aims to ensure that the group maintains an appropriate balance between risk and reward. Return targets and risk appetite limits are set to ensure the group achieves its overall strategic objectives, namely to:

- deliver long-term franchise value;
- deliver superior and sustainable economic returns to shareholders within acceptable levels of volatility; and
- maintain balance sheet strength.

The group's strategic objectives and financial targets frame its risk appetite in the context of risk, reward and growth, and contextualise the level of reward the group expects to deliver to its stakeholders under normal and stressed conditions for the direct and consequential risks it assumes in the normal course of business.

Risk capacity is the absolute maximum level of risk the group can technically assume given its current available financial resources. Risk capacity provides a reference for risk appetite and is not intended to be reached under any circumstances.

Risk limits are clearly defined risk boundaries for different measures per risk type, and are also referred to as thresholds, tolerances or triggers.

The return and risk appetite statement aims to drive the discipline of balancing risk, return and sustainable growth across all portfolios. Through this process, the group ultimately seeks to achieve an optimal trade-off between its ability to take on risk, and the sustainability of the returns delivered to shareholders.

The group's risk/return profile is monitored regularly, using risk appetite limits, which are measured on a point-in-time and forward-looking basis.

Risk appetite influences business plans and informs risk-taking activities and strategies.

The following diagram illustrates the risk and return metrics and processes, which aim to align risk and return metrics with the group's strategic objectives, commitments to stakeholders, performance measurement objectives and the financial resource management process. It also informs the medium- to long-term targets and strategies in terms of return, growth and risk appetite.

FIRSTRAND RISK AND RETURN METRICS

The following diagram outlines the quantitative measures and qualitative principles of the risk/return framework. The measures are continually reassessed as part of the group's ongoing review and refinement of its risk/return framework.

RISK/RETURN FRAMEWORK

QUANTITATIVE MEASURES

Normal cycle

Performance targets		Resource objectives and constraints		
% **Returns**	ROE **18% – 22%**	**Solvency**	CET1 capital **10% – 11%**	Leverage **>5.5%**
Earnings growth	Normalised earnings growth **Nominal GDP plus >0% – 3%**	**Liquidity**	To exceed minimum regulatory requirements with appropriate buffers	
	Credit rating*: Equal to highest in SA banking industry			

** Refers to a rating agency's measure of a bank's intrinsic creditworthiness before considering external factors and refers to FirstRand Bank Limited.*

Normal downturn and stressed downturn

Limits set for earnings fall under stressed conditions, as well as minimum ROE, CET1, leverage and liquidity ratios.

RISK LIMITS

Risk limits, thresholds, tolerances and triggers are defined per risk type.

QUALITATIVE PRINCIPLES

Always act with a fiduciary mindset.	Limit concentrations in risky asset classes or sectors.
Comply with prudential regulatory requirements.	Avoid reputational damage.
Comply with the spirit and intention of accounting and regulatory requirements.	Manage the business on a through-the-cycle basis to ensure sustainability.
Build and maintain a strong balance sheet which reflects conservatism and prudence across all disciplines.	Identify, measure, understand and manage the impact of downturn and stress conditions.
Do not take risk without a deep understanding thereof.	Strive for operational excellence and responsible business conduct.
Comply with internal targets in various defined states to the required confidence interval.	Ensure the group's sources of income remain appropriately diversified across activities, products, segments, markets and geographies.
Do not implement business models with excessive gearing through either on- or off-balance sheet leverage.	

Financial resource management

The management of the group's financial resources, which it defines as capital, funding and liquidity, and risk capacity, is a critical enabler of the achievement of FirstRand's stated growth and return targets, and is driven by the group's overall risk appetite.

Forecast growth in earnings and balance sheet RWA is based on the group's macroeconomic outlook and evaluated against available financial resources, considering the requirements of capital providers, regulators and rating agencies. The expected outcomes and constraints are then stress tested, and the group sets targets for different business cycles and scenarios to enable FirstRand to deliver on its commitments to stakeholders at a defined confidence level.

The management of the group's financial resources is executed through Group Treasury and is independent of the operating businesses. This ensures the required level of discipline is applied in the allocation and pricing of financial resources. This also ensures that Group Treasury's mandate is aligned with the portfolio's growth, return and volatility targets to deliver shareholder value. The group continues to monitor and proactively manage a fast-changing regulatory environment, competitive landscape and ongoing macroeconomic challenges.

The group adopts a disciplined approach to the management of its foreign currency balance sheet. The framework for the management of external debt takes into account sources of sovereign risk and foreign currency funding capacity, as well as the macroeconomic vulnerabilities of South Africa. The group employs self-imposed structural borrowing and liquidity risk limits, which are more onerous than those required in terms of regulations. The group's philosophy is that, in the longer term, foreign currency assets should be supported by foreign currency liabilities, primarily in the same jurisdiction. It aligns with one of the group's strategic priorities to increase diversification by jurisdiction, which is evidenced by the integration of the MotoNovo business with Aldermore Group in the UK, as well as the utilisation of the RMB International Mauritius platform for the group's rest of Africa dollar exposures.

Despite increasing competition, the group believes that its disciplined and dynamic approach to financial resource management provides it with the ability to further enhance the value proposition to customers and optimally utilise platforms across the group to deliver on commitments to stakeholders.

FirstRand uses the group's macroeconomic house view for budgeting, forecasting and business origination strategies. The house view focuses on the key macroeconomic variables that impact the group's financial performance and risk position. The macroeconomic outlook for South Africa and a number of other jurisdictions where the group operates, is reviewed on a monthly basis over a three-year forecast horizon. The house view for other jurisdictions with less frequent data updates is updated at least quarterly. Business plans for the next three years are captured in the budget and forecasting process. Scenario planning is then used to assess whether the desired profile can be delivered and whether the group will remain within the constraints that have been set. These scenarios are based on changing macroeconomic variables, plausible event risks, and regulatory and competitive changes.

The strategy, risk and financial resource management processes inform the capital and funding plans of the group. Analysis and understanding of value drivers, markets and the macroeconomic environment also inform portfolio optimisation decisions as well as the price and allocation of financial resources.

Stress testing and scenario planning

Stress testing and scenario planning serve a number of regulatory and internal business purposes, and are conducted for the group and the bank across different risk types, factors and indicators. The group employs a comprehensive, consistent and integrated approach to stress testing and scenario analysis. The group evaluates the impact of various macroeconomic scenarios on the business and considers the need for adjustment to origination and takes appropriate actions. More severe macroeconomic scenarios are run less frequently, but are critical to determine or test capital buffers and other risk appetite measures, enhance capital and liquidity planning, validate existing quantitative risk models and improve the understanding of required management actions/ responses.

Stress tests are conducted throughout the group for most legal entities, whether regulated or not. The various stress test processes are supported by a robust and holistic framework, underpinned by principles and sound governance, and aligned to regulatory requirements and best practice.

Stress testing and scenario analysis provide the board and management with useful insight into the group's financial position, level of earnings volatility, risk profile and future capital position. Results are used to challenge and review certain of the group's risk appetite measures, which, over time, influence the allocation of financial resources across businesses and impact performance measurement.

From a regulatory perspective, stress testing and scenario analysis feed into the group's ICAAP and recovery plan. The ICAAP stress test is an enterprise-wide, macroeconomic stress test covering material risks that the group is exposed to. It typically covers a three-year horizon, with separate ICAAP submissions completed for the group's regulated banking entities which are subject to Basel II requirements. The severity of the macroeconomic scenarios ranges from a mild downturn to severe stress scenarios. In addition to macroeconomic scenarios, the group incorporates event risks and reverse stress test scenarios that highlight contagion between risk types. Techniques and methodologies range from multi-factor and regression analyses for macroeconomic stress tests to single-factor sensitivities and qualitative impact analysis for event risks and reverse stress tests.

The group's recovery plan builds on its ICAAP. The scenarios defined for ICAAP are extended and incorporate the following scenarios:

- systemic;
- idiosyncratic;
- fast-moving; and
- slow-moving.

The results of the ICAAP and recovery plan process are submitted to the PA annually and are key inputs into:

- determination of the capital buffer and targets;
- dividend proposals;
- the group's earnings volatility measures; and
- performance management requirements.

The group regularly runs additional *ad hoc* stress tests for both internal and regulatory purposes. Internally, risk-specific stress tests may utilise various techniques depending on the purpose (e.g. limit setting or risk identification). From a regulatory perspective, the group expects to be subjected to more frequent supervisory stress tests covering a range of objectives.

Application of the risk/return framework and risk limits

Risk appetite targets and limits are used to monitor the group's risk/return profile on an ongoing basis and are measured point-in-time and on a forward-looking basis. Risk appetite influences business plans and informs risk-taking activities and strategies. The risk/return framework provides for a structured approach to define risk appetite, targets and limits that apply to each key resource as well as the level of risk that can be assumed in this context. The group cascades overall appetite into targets and limits at risk type, business and activity level, and these represent the constraints the group imposes to ensure its commitments are attainable. Risk management roles and responsibilities are outlined in the BPRMF. Risk appetite measures and risk limits per risk type are provided below.

FUNDING AND LIQUIDITY RISK

Liquidity risk is an inevitable consequence of the group's business activities. Group Treasury sets the group's funding risk appetite. This is done through ongoing engagement with stakeholders across businesses to determine funding requirements during business-as-usual and stress scenarios. Liquidity risk is managed by optimising the group's funding profile within structural and regulatory constraints, with the objective of enabling the group to operate in an efficient and sustainable manner.

Risk appetite levels are set in relation to the composition of funding as well as the marketability of the group's assets, in particular the mix and size of liquidity buffers held. These strategies are impacted by prudential requirements including regulatory liquidity requirements, namely LCR and NSFR. These regulatory constraints and risk appetite levels are incorporated into the group's internal funds transfer pricing framework.

The funds transfer pricing framework incorporates liquidity costs and benefits as well as regulatory friction costs into product pricing and performance measurement for all on- and off-balance sheet activities. The funds transfer pricing process is a key management tool for funding appetite allowing for pricing of products within the group's desired risk appetite levels.

Liquidity risk appetite is additionally monitored in terms of survival periods. Survival periods are the minimum time frames over which the cumulative cash inflows exceed cash outflows. Survival periods provide management sufficient time to take mitigating actions to adjust the group's liquidity profile. Risk appetite levels in relation to survival periods are analysed at various reporting levels and for significant currencies. The survival period aligns to prudential requirements inherent in the LCR, namely 30 days. Monitoring of actual performance against limits and limit utilisation is performed and reported daily, weekly and monthly, as appropriate, to various management and governance committees.

CREDIT RISK

The group aims to manage credit in such a way that it can achieve its overall earnings growth target and within acceptable volatility levels. The group's credit risk appetite, aligned to the group's overall risk appetite, is determined through supplementing a top-down group credit risk appetite with an aggregated bottom-up assessment of business unit level credit risk appetite. Stress testing is used to enable measurement of financial performance and the credit volatility profile of the different credit business units at a portfolio, segment, business, and ultimately at a diversified group-wide level.

The credit risk appetite statement is articulated to describe acceptable downside risk, i.e. definition of acceptable performance outcomes under different economic cycles. The key performance measures are credit loss ratios, ROE and NIACC. These measures are forward looking and stressed assessments correspond to macroeconomic stress scenarios applied in the group's stress testing.

To achieve outcomes within these constraints, risk limits for new and existing business are articulated within business segments. This is done to manage concentrations in credit segments contributing to high and/or volatile credit losses. Business risk limits are managed through assessing volatility of credit losses, product pricing strategies, product cost structures and capital requirements. Business risk limits include the following elements:

- counterparty limits based on borrower risk segments, for example FirstRand (FR) rating grades;
- collateral limits for secured lending based on collateral profiles, for example loan-to-value bands;
- concentration limits including single counterparty, counterparty grouped by FR ratings, collateral loan-to-value bands, gearing, industry, market, maturity and geography; and
- capacity limits based on measures of customer affordability, e.g. repayments-to-income bands.

Credit origination strategies are refined on an ongoing basis to ensure credit profiles are maintained within these risk limits. The financial performance, monitoring against limits, economic growth potential, lending conditions, financial soundness, and balance sheet structure of large counterparties as well as non-performing and impairment trends, economic indicators of specific industries, and macroeconomic and political factors, are continually assessed to determine the appropriateness of limits.

COUNTERPARTY CREDIT RISK

The counterparty credit risk management process is aligned to credit risk management practices and includes the setting of counterparty credit risk limits, quantifying the potential credit exposure over the life of the product, monitoring of limit utilisation, collateral management and ongoing portfolio risk management.

Risk appetite for the OTC derivatives and prime financing portfolio is based on exposure appetite and a measure of the cost-to-close of a counterparty's position. Exposure appetite is based on the open exposure the group is willing to assume against a given counterparty, the activity that the counterparty is engaged in, quality and trading liquidity of the underlying securities, and associated impact on the counterparty's credit quality.

Credit risk management sets pre-settlement, settlement, contingent, concentration and other limits *vis-à-vis* each counterparty, and policies and procedures outline the methodology for establishing these credit limits. Nominal (risk-equivalent amount) and loss in the event of default limits are set for prudential limit purposes. The loan equivalent risk amount is typically used in jurisdictions which recognise the legal right of netting exposures and collateral. In addition, regardless of the transaction credit limits to be applied, all transactions are subjected to specific country risk limits and the availability of these at the time of transacting.

TRADED MARKET RISK

Quantitative and qualitative market risk limits are set in line with the group's risk appetite. Quantitative limits for income volatility at a very high confidence level (99%) under distressed conditions per unit time are set and expressed as:

- VaR and ETL limits per asset class, business line and business unit;
- stress-loss limits at the risk factor level for less sophisticated trading businesses;
- regulatory capital limits;
- nominal limits for specific risk items;
- absolute loss thresholds; and
- risk concentration limits.

Qualitative risk appetite measures include business mandates, specific product and trading strategies, and process breakdown tolerance levels. There is zero tolerance for operating outside of any legislation or supervisory regulations in respect of market risk.

Utilisation of ETL limits and market risk exposure against stress exposure limits are monitored daily. Monitoring includes the reporting of limit breaches, causes thereof and the rectification of the breaches to appropriate management and governance committees. The market risk portfolio is stressed on a quarterly basis to ensure that the group's earnings volatility limits will not be breached.

INTEREST RATE RISK IN THE BANKING BOOK

A change in interest rates impacts the group's short-term financial performance (earnings) and its long-term economic value. The group has both earnings sensitivity and NAV sensitivity limits in place to protect against volatility in the income statement and balance sheet, respectively. Since earnings volatility and NAV volatility are inversely related, the group's risk appetite seeks to optimise these two measures.

EQUITY INVESTMENT RISK

Quantitative and qualitative investment risk limits are set annually in line with the group's risk appetite. Qualitative aspects are expressed in terms of strategic business mix, business activity and zero tolerance for operating outside legislative or regulatory constraints. Quantitative nominal value limits are set at a group level and then set for business activities and business units. The entire investment risk portfolio is also managed by considering concentration factors such as geographic distribution, investment value size, counterparty exposures and industry concentrations.

Regulatory capital limits are applied to restrict the balance sheet size on a risk-adjusted basis. Rating agencies' guidance is considered in the setting of limits and monitoring of actual performance against limits to limit portfolio size equity exposure (carrying value) as a percentage of Tier 1 capital.

A key element of monitoring equity investment risk is an assessment of potential earnings volatility that may arise from underlying activities. The portfolio is stressed on a quarterly basis to ensure that earnings volatility remains within appropriate levels.

OPERATIONAL RISK

Operational risk appetite is set at group and business level and includes qualitative and quantitative statements. Operational risk appetite is set as the total annual operational loss amount the group is willing to accept at various confidence/probability levels. This process includes setting:

- a risk appetite profile and monitoring the actual operational risk profile against appetite;
- operational loss thresholds and measuring these against actual loss experience; and
- other quantitative and qualitative measures, including key risk indicators and zero tolerance statements.

Risk appetite levels are based on management's appetite for operational risk and consider historical loss experience, current actual risk exposures and the willingness of management to accept risk in pursuit of strategic objectives. For different probability levels, current actual risk exposures are estimated using internal loss data and operational risk scenarios. Actual risk exposures are monitored against the set risk appetite profile.

Annualised loss thresholds are defined for reporting and escalation of losses. Loss thresholds are derived from set risk appetite profile probability levels. Qualitative expressions of risk appetite emphasise risk culture and the relationship between risk and business management/action.

Recovery and resolution regime

Financial Stability Board (FSB) member countries are required to have recovery and resolution plans in place for all systemically significant financial institutions as per the *Key Attributes of Effective Resolution Regimes*. The PA adopted this requirement and has, as part of the first phase, required D-SIBs to develop their own recovery plans. Improving the stability of the banking system by strengthening banks' ability to manage themselves through a potentially severe stress situation is of national importance. Guidance issued by the FSB and PA has been incorporated into the group's comprehensive recovery plan.

RECOVERY PLANNING

The purpose of the recovery plan is to document how FirstRand's board and management, including its operating businesses and key subsidiaries, namely FRB (including its foreign branches), Aldermore, FirstRand Namibia and FNB Botswana, will recover from a severe stress event/scenario that threatens their commercial viability.

The recovery plan:

- analyses the potential for severe stress in the group that could cause material disruption to the financial system;
- considers the type of stress event(s) that would be necessary to trigger its activation;
- analyses how the entity might potentially be affected by the event(s);
- lists a menu of potential recovery actions available to the board and management to counteract the event(s); and
- assesses how the entity might recover from the event(s) as a result of those actions.

The recovery plan forces the group to perform an extensive self-assessment exercise to determine if there are any potential idiosyncratic vulnerabilities that it may be exposed to, and then reconcile these exposures to its own risk appetite and strategy. Strategies to optimise the balance sheet structure and preserve the group's critical functions to support the recovery from a severe stress event with the least negative impact are considered. This process enables banks to better understand the critical functions for customers and the financial system, as well as which assets are most marketable to facilitate recovery. Where inefficiencies are identified, these can be addressed to ensure the group is more streamlined, adaptable and resilient to stress.

To date, FirstRand has submitted six annually revised versions of its recovery plan to the PA, the most recent in December 2018.

RESOLUTION FRAMEWORK

The draft Financial Sector Laws Amendment Bill (FSLAB) was published for comment by National Treasury in October 2018. In order to support the pending resolution framework, the bill proposes the necessary amendments to various acts, including the Insolvency Act, the SARB Act, the Banks Act, the Mutual Banks Act, the Competition Act, the Financial Markets Act and the Insurance Act, with a view to strengthen the ability of the SARB to manage the orderly resolution or winding down of a failing financial institution with minimum disruption to the broader economy. One of the key amendments included in the bill is the establishment of the Corporation of Deposit Insurance designed to protect depositors' funds and enhance financial stability. The bill is awaiting promulgation by parliament before it is enacted, but, in the interim, the relevant regulators are continuously engaging with industry to continue working on the design and finalisation of the outstanding elements of the resolution framework.

The SARB released a discussion paper on South Africa's intended approach to bank resolution on 23 July 2019. The closing date for public comment was 31 August 2019. The discussion paper outlines the objectives of the resolution framework, and planning and conducting a resolution with an emphasis on open-bank resolution. This is applicable to systemically important institutions. The intended bank resolution provides more clarity on the regulator's approach to further enhance financial stability in the country.

The discussion paper is a first draft and likely to be revised and expanded in future. Comments received on the discussion paper will assist the SARB in drafting the regulatory standards for resolution once the FSLAB is promulgated.

Link between financial statements and regulatory exposures

BASIS OF CONSOLIDATION

Consolidation of all group entities for accounting purposes is in accordance with IFRS and for regulatory purposes in accordance with the requirements of the Regulations. There are some differences in the manner in which entities are consolidated for accounting and regulatory purposes. The following table provides the basis on which the different types of entities are treated for regulatory purposes.

REGULATORY CONSOLIDATION TREATMENT

SHARE-HOLDING	REGULATORY*			IFRS
	BANKING, SECURITY FIRM, FINANCIAL	INSURANCE	COMMERCIAL	
Less than 10%	Aggregate of investments (CET1, AT1 and Tier 2): → Amount exceeding 10% CET1 capital – deduction against corresponding component of capital; and → Up to 10% – risk weight based on nature of instrument and measurement approach.		Standardised approach: → Minimum risk weight of 100%. Internal rating-based approach: → Maximum risk weight of 1 250%.	Financial assets at mandatory fair value through profit or loss, designated fair value through profit or loss, or fair value through other comprehensive income. Where the substance of the transaction indicates that the group is able to exercise significant influence or joint control over the entity, equity accounting is applied.
Between 10% and 20%	CET1 capital: → Individual investments in excess of 10% CET1 – deduction against CET1 capital; and → Individual investments up to 10% apply threshold rules. AT1 and Tier 2: → Deduct against corresponding component of capital.			
Between 20% and 50%	Legal or *de facto* support (other significant shareholder): → Proportionately consolidate. No other significant shareholder: → Apply threshold rules.	→ Apply deduction methodology, with 100% derecognition of IFRS NAV. → Cost of investment subject to threshold rules.	Standardised and internal rating based approach: → Individual investment greater than 15% of CET1, AT1 and Tier 2: risk weight at 1 250%. → Individual investment up to 15% of CET1, AT1 and Tier 2: risk weight at no less than 100%. → Aggregate of investments exceeding 60% of CET1, AT1 and Tier 2: excess risk weighted at 1 250% (standardised only).	Equity accounting where the substance of the transaction indicates that the group has the ability to exercise significant influence or joint control, but does not control the entity.
Greater than 50%	Entity conducting trading activities/other bank, security firm or financial entity: → Consolidate.			Consolidate, unless the substance of the transaction indicates that the group does not control the entity, in which case equity accounting will apply.

* *As per the Regulations.*

Threshold rules

As per Regulation 38 (5), investments are aggregated as part of threshold deductions (significant investments, mortgage servicing rights and deferred tax assets relating to temporary differences). Aggregate investments up to 15% are risk weighted at 250% and amounts exceeding 15% are deducted against CET1 capital.

Insurance entities

Under the insurance category, material wholly-owned insurance subsidiaries incorporated in South Africa include FirstRand Life Assurance Limited with a NAV of R856 million (2018: R930 million), FirstRand Insurance Services Company Limited (FRISCOL) with a NAV of R489 million (2018: R461 million) and FirstRand Short-Term Insurance (STI) with a NAV of R150 million (2018: R53 million).

MAPPING OF FINANCIAL STATEMENT CATEGORIES TO REGULATORY RISK CATEGORIES

Pillar 3 disclosure is prepared in accordance with the regulatory frameworks applicable to the group while the annual financial statements are prepared in accordance with IFRS. The amount included under regulatory scope excludes balances related to insurance entities.

The risk measurement approaches to calculate regulatory capital, applicable to each of the risk frameworks, are described on page 20. The following table provides the differences between the amounts included in the balance sheet and the amounts included in the regulatory frameworks.

LI1: MAPPING OF FINANCIAL STATEMENT CATEGORIES WITH REGULATORY FRAMEWORKS

	As at 30 June 2019							
	Carrying values							
			Items under regulatory frameworks					
R million	Statement of financial position	Regulatory scope	Credit risk	Counter-party credit risk	Securiti-sation	Market risk	Equity invest-ment risk	No capital/ deducted from capital
Assets								
Cash and cash equivalents	102 518	102 454	76 009	24 499	2 141	–	–	–
Derivative financial instruments*	47 104	47 104	–	46 964	140	39 450	–	–
Commodities	21 176	21 179	–	–	–	21 179	–	–
Investment securities**	241 726	235 523	156 607	–	–	59 740	21 835	–
Advances#	1 205 752	1 205 752	1 090 826	45 653	69 273	–	–	–
Accounts receivable	8 578	8 357	8 357	–	–	–	–	–
Current tax asset	267	257	257	–	–	–	–	–
Reinsurance assets	196	–	–	–	–	–	–	–
Investments in associates	6 369	6 369	–	–	–	–	6 369	–
Investments in joint ventures	1 769	1 776	–	–	–	–	1 776	–
Property and equipment	17 800	17 791	17 791	–	–	–	–	–
Intangible assets	10 491	10 031	–	–	–	–	–	10 031
Investment properties	689	689	689	–	–	–	–	–
Defined benefit post-employment asset	6	6	–	–	–	–	–	6
Deferred income tax asset	4 621	3 768	3 481	–	–	–	–	287
Investment in subsidiaries	–	900	–	–	–	–	900	–
Total assets	1 669 062	1 661 956	1 353 822	117 116	71 554	120 369	30 880	10 324
Liabilities								
Short trading positions	5 374	5 374	–	–	–	5 374	–	–
Derivative financial instruments*	52 597	52 597	–	52 457	140	48 365	–	–
Creditors, accruals and provisions	21 922	21 501	–	–	2 014	–	–	19 487
Current tax liability	1 643	1 626	–	–	–	–	–	1 626
Liabilities directly associated with disposal groups held for sale	–	–	–	–	–	–	–	–
Deposits	1 393 104	1 393 075	–	38 509	30 199	–	–	1 324 367
Employee liabilities	13 042	12 947	–	–	–	–	–	12 947
Other liabilities	5 974	5 974	–	–	–	–	–	5 974
Policyholder liabilities	5 263	–	–	–	–	–	–	–
Tier 2 liabilities	24 191	23 649	–	–	–	–	–	23 649
Deferred income tax liability	1 359	1 322	–	–	–	–	–	1 322
Amounts due to holding company and fellow subsidiary companies	–	260	–	–	–	–	–	260
Total liabilities	1 524 469	1 518 325	–	90 966	32 353	53 739	–	1 389 632

* *The amounts shown in the regulatory scope column do not equal the sum of the amounts shown in the remaining columns due to derivative financial instruments subject to regulatory capital for counterparty credit risk, securitisations and market risk (trading book).*

** *The amounts shown in the regulatory scope column do not equal the sum of the amounts shown in the remaining columns due to investment securities subject to regulatory capital under credit and market risk frameworks, and listed and unlisted equities under the equity investment risk framework.*

\# *Advances net of impairments.*

The amounts from different balance sheet line items included in the risk frameworks are described in the following table.

BALANCE SHEET LINE ITEMS INCLUDED IN DIFFERENT RISK FRAMEWORKS

RISK FRAMEWORK	DESCRIPTION
Credit risk	Cash and cash equivalents, commodity-related loans and advances, and debt investment securities. Advances included in the credit risk framework are shown net of impairments in the balance sheet, while impairments are not used to reduce advances when determining the regulatory EAD. EAD also includes off-balance sheet items, such as guarantees, irrevocable commitments, letters of credit and credit derivatives. Credit risk mitigation is included in the calculation of EAD. Other assets including accounts receivable, current tax assets, property and equipment, investment properties and deferred tax assets related to temporary differences are included in the credit risk framework.
Counterparty credit risk	Collateral cash and deposits as part of netting agreements, derivative financial assets and liabilities and reverse repurchase advances. Exposures included in counterparty credit risk relate to trading and banking book activities.
Securitisations	Cash, advances, derivative financial instruments held for trading, payables and deposits. Capital is determined on the investment security note exposure retained by the group.
Market risk	Derivative financial instruments (assets and liabilities), commodities, held for trading and elected fair value investment securities, and short trading position liabilities.
Equity investment risk	Listed and non-listed equity investment securities, non-current assets held for sale related to equity investments, if applicable, and investments in associates, joint ventures and subsidiaries.
No capital/deducted from capital	Intangible assets, defined benefit post-employment assets and deferred tax assets excluding temporary differences are deducted from capital.

LI2: SOURCES OF DIFFERENCE BETWEEN REGULATORY EXPOSURE AMOUNTS AND CARRYING VALUE IN FINANCIAL STATEMENTS

	As at 30 June 2019				
	Items subject to regulatory frameworks				
R million	Credit risk	Counter-party credit risk	Securi-tisation	Market risk	Equity investment risk
Assets carrying value per regulatory scope of consolidation	1 353 822	117 116	71 554	120 369	30 880
Liabilities carrying value per regulatory scope of consolidation	–	(90 966)	(32 353)	(53 739)	–
Total net amount under regulatory scope of consolidation	1 353 822	26 150	39 201	66 630	30 880
Off-balance sheet amounts	188 517	–	5 152	–	24
Differences in valuations	58 138	31 387	–	–	–
Differences due to netting rules and credit risk mitigation	(175 263)	(41 732)	–	–	–
Difference due to potential future exposure for CCR	–	10 083	–	–	–
Differences due to provisions	30 675	–	–	–	–
Differences due to prudential filters	(79 809)	–	2 285	–	(19 074)
Exposure amounts considered for regulatory purposes	1 376 080	25 888	46 638	66 630	11 830
Reconciliation to regulatory amounts in Pillar 3 tables					
CR6: AIRB – FRB SA EAD post-credit conversion factors (CCF) and credit risk mitigation (CRM)	1 062 651	–	–	–	–
CR4: Standardised approach on- and off-balance sheet amount of exposure post-CCF an -CRM	293 265	–	–	–	–
CR10: Specialised lending exposures under slotting on- and off-balance sheet amount	20 164	–	–	–	–
CCR1: EAD post-CRM	–	24 165	–	–	–
CCR3: Standardised approach for derivatives for subsidiaries in the rest of Africa and foreign branches – total credit exposure	–	1 723	–	–	–
SEC1: Total securitisation exposures in the banking book	–	–	46 638	–	–
Carrying value of investments*	–	–	–	–	11 830
Total	1 376 080	25 888	46 638	66 630	11 830

* *For the carrying value of investments refer to page 170 of this report.*

PRUDENT VALUATIONS

Valuation methodology

The group measures certain assets and liabilities at fair value.

Fair value is the price that would be received (when selling an asset) or paid (to transfer a liability) in an orderly transaction between market participants at the measurement date, i.e. an exit price. Fair value is, therefore, a market-based measurement and, when measuring fair value, the group uses the assumptions that market participants would use when pricing an asset or liability under current market conditions, including assumptions about risk. When determining fair value, it is presumed that the entity is a going concern and the fair value is, therefore, not an amount that represents a forced transaction, involuntary liquidation or distressed sale.

Fair value measurements are determined by the group on both a recurring and non-recurring basis.

Recurring financial instruments

Recurring fair value measurements include assets and liabilities that IFRS requires or permits to be measured at fair value at every reporting date. This includes financial assets and financial liabilities, and non-financial assets, including investment properties and commodities that the group measures at fair value at the end of each reporting period.

Non-recurring fair value measurements

Non-recurring fair value measurements are those triggered by particular circumstances and include:

- the classification of assets and liabilities as non-current assets or disposal groups held for sale under IFRS 5 where the asset's measurement is based on the fair value less costs to sell due to the fair value less costs to sell being lower than the carrying amount;
- IFRS 3 where assets and liabilities are measured at fair value at acquisition date; and
- IAS 36 where the recoverable amount is based on fair value less costs to sell.

Valuation process

The group classifies assets and liabilities measured at fair value using a fair value hierarchy that reflects whether observable or unobservable inputs are used in determining the fair value of the item. Fair value may be determined using unadjusted quoted prices in active markets for identical assets, and liabilities where it is readily available, and the price represents actual and regularly occurring market transactions. If this information is not available, fair value is measured using another valuation technique that maximises the use of relevant observable inputs and minimises the use of unobservable inputs.

Where a valuation model is applied and the group cannot mark-to-market, it applies a mark-to-model approach, subject to valuation adjustments. Mark-to-model is defined as any valuation which has to be benchmarked, extrapolated or otherwise calculated from a market input. The group will consider the following in assessing whether mark-to-model valuation is appropriate:

- as far as possible, market inputs are sourced in line with market prices;
- generally accepted valuation methodologies are used for particular products unless deemed inappropriate by the relevant governance forums;
- where a model has been developed in-house, it is based on appropriate assumptions, which have been assessed and challenged by suitably qualified parties independent of the development process;
- formal change control procedures are in place;
- awareness of the weaknesses of the models used and appropriate reflection in the valuation output;
- the model is subject to periodic review to determine the accuracy of its performance; and
- valuation adjustments are only made when appropriate, e.g. to cover uncertainty of the model valuation. The group considers factors such as counterparty and own credit risk when making appropriate valuation adjustments.

FINANCIAL INSTRUMENTS	
Fair value hierarchy	**Valuation methodology**
Instruments where fair value is determined using unadjusted quoted prices in an active market The fair value of these instruments is determined using unadjusted quoted prices in an active market for identical assets. An active market is one in which transactions occur with sufficient volume and frequency to provide pricing information on an ongoing basis.	This category includes listed bonds and equity, exchange-traded derivatives and short trading positions. The price within the bid/ask spread that is most representative of fair value in the circumstances.
Instruments where fair value is determined using inputs from observable market data or an inactive market Valuation uses quoted prices in an active market of similar instruments or valuation models using observable inputs from observable market data.	This category includes loans and advances to customers, equities listed in an inactive market, certain debt instruments, OTC derivatives or exchange-traded derivatives where a market price is not available, deposits, other liabilities and Tier 2 liabilities. Valuation techniques include: → discounted cash flows; → option pricing models; → industry standard models; → price/earnings models; and → JSE debt market bond pricing model.
Instruments where fair value is determined using inputs from unobservable data The group applies its own assumptions about what market participants assume in pricing assets and liabilities.	This category includes certain loans and advances to customers, certain OTC derivatives such as equity options, investments in debt instruments, certain deposits such as credit-linked notes and certain other liabilities. Valuation techniques include: → discounted cash flows; → option pricing models; → industry standard models; → price/earnings models; → third-party valuations; and → adjusted market prices.

NON-FINANCIAL ASSETS

- A market participant's ability to generate economic benefits by using the assets in its highest and best use or by selling it to another market participant that will use the asset in its highest and best use is taken into account.
- Include the use of the asset that is physically possible, legally permissible and financially feasible.
- In determining the fair value of the group's investment properties and commodities, the highest and best use of the assets is their current use.

Validation process

The group has established control frameworks and processes at a business level to independently validate its valuation techniques and inputs used to determine its fair value measurements. Valuation inputs are independently sourced, but where an independent source is not available, inputs are subject to the independent validation process. At a business level, technical teams are responsible for the selection, implementation and any changes to the valuation techniques used to determine fair value measurements. Valuation committees comprising key management representatives have been established in each operating business and at an overall group level, and are responsible for overseeing the valuation control process and considering the appropriateness of the valuation techniques applied in fair value measurement. The valuation models and methodologies are subject to independent review and approval at a business level by the technical teams, valuation committees, relevant risk committees and external auditors annually or more frequently, if considered appropriate.

Prudent valuation adjustments

Capital regulatory frameworks require financial institutions to apply prudent valuation to all fair value assets and liabilities. The difference between the prudent value and the fair value in terms of IFRS, called prudent valuation adjustments (PVAs), is directly deducted from CET1 capital. The following table provides descriptions of the different PVAs.

PVA	DESCRIPTION
Close-out uncertainty, of which:	
Mid-market value: market price uncertainty	This adjustment is required should there be uncertainty around the absolute level at which positions are fair-valued under financial reporting standards.
Close-out costs	A close-out cost PVA is calculated at a defined valuation exposure level (price or curve bucketing segment). This adjustment is incremental to any exit price provisions or adjustments already considered in financial reporting.
Concentration	This PVA is an estimate of the valuation impact arising from concentrated valuation positions that a bank may have at any point in time. It should capture the risk associated with holding a relatively large position in relation to the market liquidity.
Early termination	Banks will estimate an early termination PVA that considers the potential losses arising from the early termination of client trades.
Model risk	This PVA considers the variation in valuation estimates arising due to the potential existence of a range of models or model calibrations and the lack of a firm exit price for the specific product.
Operational risk	This PVA considers the potential losses that may be incurred as a result of operational risk related to valuation processes.
Investing and funding costs	Reflect the valuation uncertainty in the funding costs that other users of Pillar 3 data would factor into the exit prices for a position or portfolio. It includes funding valuation adjustments or derivative exposures.
Unearned credit spreads	PVA to take account of the valuation uncertainty in the adjustment necessary to include the current value of expected losses due to counterparty default on derivative positions, including the valuation uncertainty on CVAs.
Future administrative costs	This adjustment considers the administrative costs and future hedging costs over the expected life of the exposures for which a direct exit price is not applied for the close-out costs. This valuation adjustment has to include the operational costs arising from hedging, administration and settlement of contracts in the portfolio. The future administrative costs are incurred by the portfolio or position, but are not reflected in the core valuation model or the prices used to calibrate inputs to that model.
Other	Other PVAs which are required to take into account factors that will influence the exit price but which do not fall in any of the categories listed above.

The types of financial instruments for which the highest amounts of PVA are observed are interest rate-related financial instruments, including investment securities and derivatives. The following table provides a breakdown of the different PVAs as at 30 June 2019.

PV1: PRUDENT VALUATION ADJUSTMENTS

	As at 30 June 2019							
R million	**Equity**	**Interest rates**	**Foreign exchange**	**Credit**	**Commo-dities**	**Total**	**Of which: In the trading book**	**Of which: In the banking book**
1. Closeout uncertainty, of which:	**–**	**330**	**13**	**(2)**	**2**	**344**	**289**	**55**
2. *Mid-market value*	**–**	**177**	**–**	**(2)**	**–**	**176**	**153**	**23**
3. *Closeout cost*	**–**	**153**	**13**	**–**	**2**	**168**	**136**	**32**
12. **Total adjustment**	**–**	**330**	**13**	**(2)**	**2**	**344**	**289**	**55**

	As at 30 June 2018							
R million	Equity	Interest rates	Foreign exchange	Credit	Commo-dities	Total	Of which: In the trading book	Of which: In the banking book
1. Closeout uncertainty, of which:	–	349	6	13	2	370	314	56
2. *Mid-market value*	–	133	(1)	3	–	135	119	16
3. *Closeout cost*	–	216	7	10	2	235	195	40
12. **Total adjustment**	–	349	6	13	2	370	314	56

Mid-market value and close-out cost are the most significant PVAs for the group. Other PVAs, namely concentration, early termination, model risk, and future administrative costs, are considered in the calibration of these PVAs and balance sheet reserves, although not separately disclosed.

The group does not calculate the PVA for operational risk, investing and funding costs or unearned credit spreads. Lines 4 – 11 of *PV1: Prudent valuation adjustments* have, therefore, been omitted.

Capital management

The group actively manages its capital base in alignment with strategy, risk appetite and risk profile. The optimal level and composition of capital is determined after taking the following into account:

- Prudential requirements, including any prescribed buffer.
- Rating agencies' considerations.
- Investor expectations.
- Peer comparison.
- Strategic and organic growth plans.
- Economic and regulatory capital requirements.
- Proposed regulatory, tax and accounting changes.
- Macro environment and stress test impacts.
- Issuance of capital instruments.

The capital planning process ensures that total capital adequacy and CET1 ratios remain within or above targets across economic and business cycles. Capital is managed on a forward-looking basis and the group remains appropriately capitalised under a range of normal and severe stress scenarios, which include expansion initiatives, corporate transactions, as well as ongoing regulatory, accounting and tax developments. The group aims to back all economic risk with loss-absorbing capital and remains well capitalised in the current environment. FirstRand's internal targets have been aligned to the PA end-state minimum capital requirements and are subject to ongoing review and consideration of various stakeholder expectations. No changes were made to the internal targets during the year. The group continues to actively manage its capital stack to ensure an efficient capital structure, which is closely aligned with its internal targets.

The group is subject to the PA's end-state minimum capital requirements, which include 100% of the capital conservation, CCyB and D-SIB buffer add-ons. The PA has not implemented any CCyB requirement for South African exposures, however, the group is required to calculate the CCyB requirement on private sector exposures in foreign jurisdictions where these buffers are applicable. Effective 28 November 2018, the Prudential Regulation Authority's CCyB requirement for UK exposures stepped up to 1.0% from 0.5%. The CCyB requirement for the group at 30 June 2019 was 18 bps, and mainly relates to the group's UK exposures.

The PA issued Directive 5/2017, *Regulatory treatment of accounting provisions – interim approach and transitional arrangements including disclosure and auditing aspects*, which allows banks to apply a transitional phase-in of the IFRS 9 Day 1 impact for regulatory capital purposes. The Day 1 implementation on 1 July 2018 reduced the group's CET1 ratio by 50 bps, and will be fully phased in by 1 July 2021. The group accounted for ≈12.5 bps at 30 June 2019.

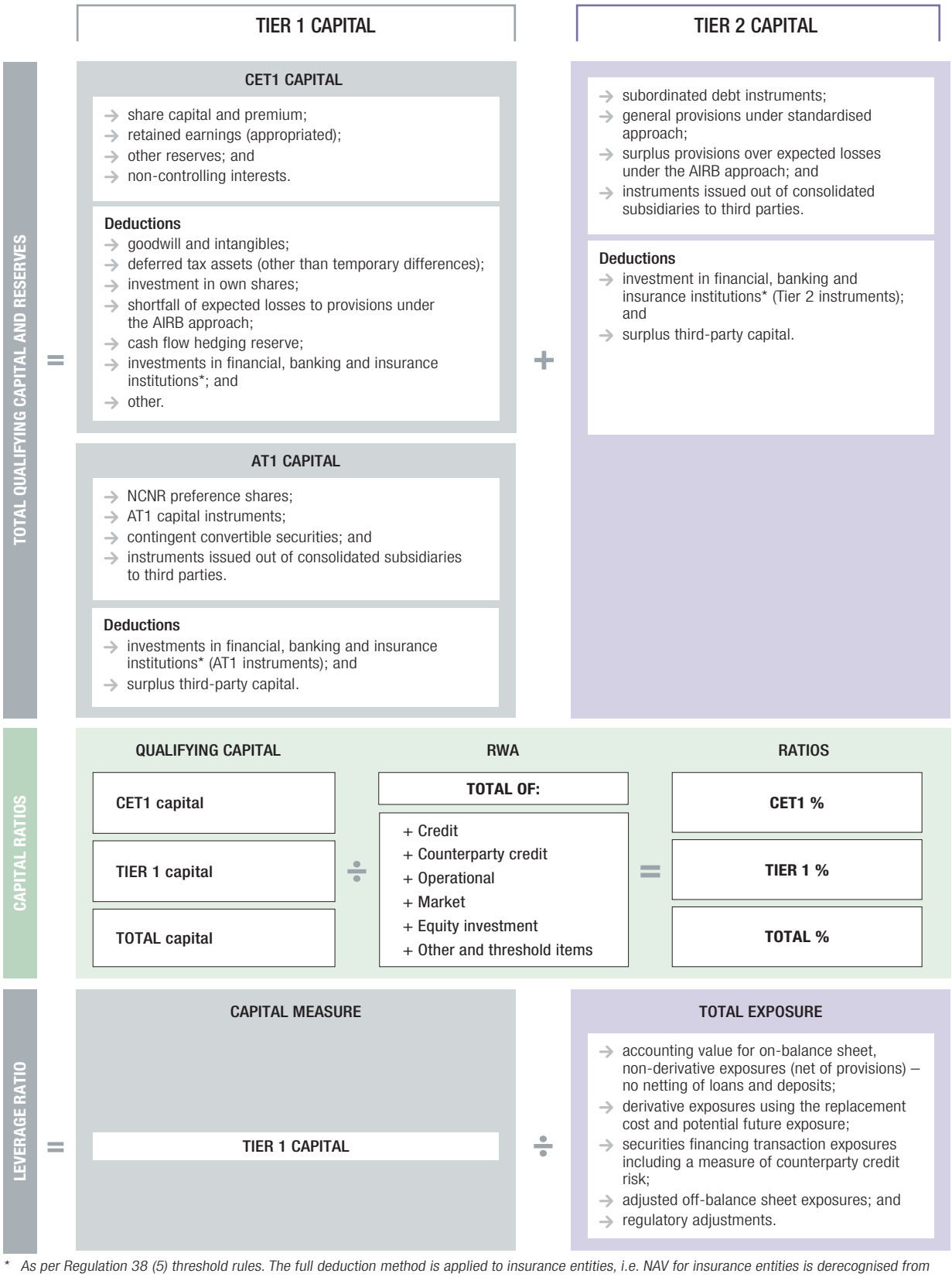
The group continues to focus on economic capital to ensure it remains solvent at a specified confidence level of 99.93% and delivers on its commitment to stakeholders within a one-year time horizon. Economic capital is defined as an internal measure of risk which estimates the amount of capital required to cover unexpected losses. For the year under review, the group remained appropriately capitalised to meet its economic capital requirements.

The Basel III leverage ratio is a supplementary measure to the risk-based capital ratios, and is a function of the Tier 1 capital measure, and total on- and off-balance sheet exposures.

CAPITAL ADEQUACY AND PLANNING

The following diagram defines the main components of capital and leverage as per the Regulations.

CAPITAL AND LEVERAGE



* *As per Regulation 38 (5) threshold rules. The full deduction method is applied to insurance entities, i.e. NAV for insurance entities is derecognised from consolidated IFRS NAV.*

YEAR UNDER REVIEW

The capital and leverage ratios at 30 June 2019 exceeded the internal targets and are summarised in the following table.

CAPITAL ADEQUACY AND LEVERAGE POSITIONS

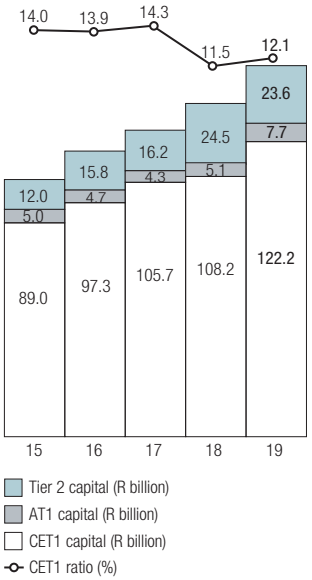
	Capital			Leverage
%	**CET1**	**Tier 1**	**Total**	**Total**
Regulatory minimum*	7.7	9.4	11.7	4.0
Internal target	10.0 – 11.0	>12.0	>14.0	>5.5
Actual				
– Including unappropriated profits	**12.1**	**12.9**	**15.2**	**7.5**
– Excluding unappropriated profits	11.3	12.0	14.4	7.0

* *Excludes the bank-specific capital requirements, but includes the CCyB requirement.*

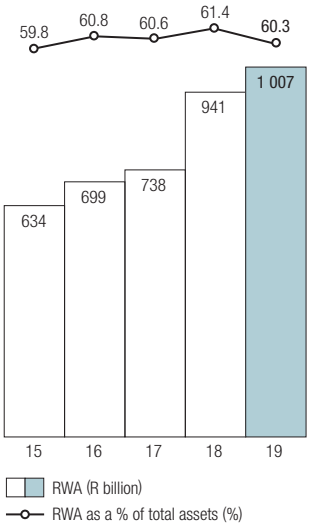
Capital

The graphs below show the historical overview of capital adequacy and RWA.

CAPITAL ADEQUACY*



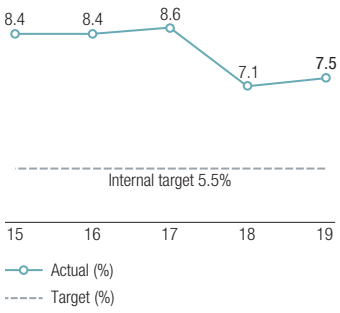
RWA HISTORY



* *Includes unappropriated profits.*

Leverage

LEVERAGE*



* *Includes unappropriated profits.*

The increase in the leverage ratio to June 2019 was mainly due to the increase in the Tier 1 capital measure, driven by R5 billion of AT1 issuances during the year. The total exposure measure increased, mainly due to an increase in on-balance sheet exposures, specifically total advances, commodities and investment securities.

Note: June 2015 to June 2018 is based on IAS 39 and June 2019 on IFRS 9.

Supply of capital

The tables below summarise the group's qualifying capital components and related movements.

COMPOSITION OF CAPITAL ANALYSIS

R million	As at 30 June 2019 IFRS 9	As at 30 June 2018 IAS 39
Including unappropriated profits		
CET1 capital	**122 194**	108 226
Tier 1 capital	**129 846**	113 342
Total qualifying capital	**153 494**	137 796
Excluding unappropriated profits		
CET1 capital	**113 429**	103 724
Tier 1 capital	**121 081**	108 840
Total qualifying capital	**144 729**	133 294

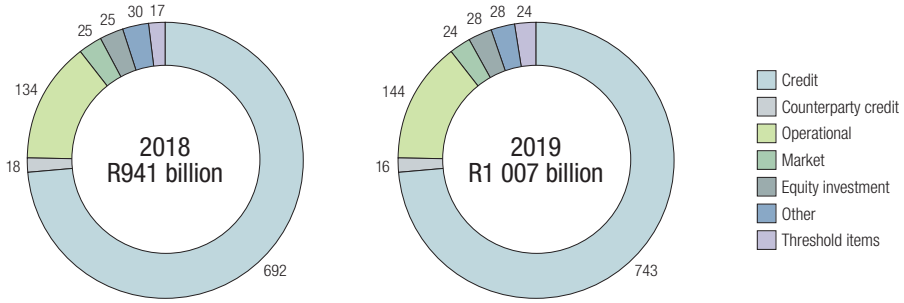
KEY DRIVERS: 2019 vs 2018		
CET1	↑	→ Ongoing internal capital generation through earnings coupled with a sustainable dividend payout. → One-off realisation relating to the Discovery transaction (±R2.3 billion) partly reduced by the Day 1 transitional impact of IFRS 9. → Recognition of FirstRand Namibia minority capital (R1.5 billion) in CET1 capital, previously included in AT1 capital.
AT1	↑	→ FRB AT1 issuance (R5.0 billion) during the year, partly offset by additional 10% haircut on NCNR preference shares not compliant with Basel III, and movement in third-party capital.
Tier 2	↓	→ Redemption of remaining old-style Tier 2 instruments (R3.2 billion) during December 2018. → Redemption of the $172.5 million Tier 2 instrument held by the International Finance Corporation in April 2019, and a R1.7 billion inaugural Basel III instrument during June 2019. → Issuance of FRB26 and FRB27 (R2.6 billion) to manage rollover of the instruments redeemed in June 2019. → Movement in third-party capital.

Demand for capital

The charts and table below summarise the year-on-year movements.

RWA ANALYSIS

R billion



Note: 2018 restated to include RWA relating to Aldermore under each risk type.

KEY DRIVERS: 2019 vs 2018		
Credit	↑	→ Organic growth, risk migration, rating changes and exchange rate movements.
Counterparty credit	↓	→ Decrease in volumes and mark-to-market movements.
Operational	↑	→ Recalibration of risk scenarios subject to AMA. → Increase in gross income for entities on TSA and BIA.
Market	↓	→ Decrease in volumes and mark-to-market movements.
Equity investment	↑	→ New investments and fair value adjustments.
Other assets	↓	→ Movements in accounts receivable, and property, plant and equipment.
Threshold items	↑	→ Movement in deferred tax assets and investments in financial, banking and insurance entities (subject to 250% risk weighting).

OV1: OVERVIEW OF RWA

		RWA			Minimum capital requirements*
R million		**As at 30 June 2019**	As at 31 March 2019	As at 30 June 2018	**As at 30 June 2019**
1.	**Credit risk (excluding counterparty credit risk)****	**704 725**	691 777	648 668	**82 312**
2.	– Standardised approach	**250 438**	241 006	221 218	**29 251**
5.	– AIRB	**454 287**	450 771	427 450	**53 061**
16.	**Securitisation exposures in banking book**	**37 792**	39 050	43 291	**4 414**
17.	– IRB ratings-based approach	**–**	–	64	**–**
18.	– IRB supervisory formula approach	**2 180**	2 092	1 888	**255**
19.	– Standardised approach/simplified supervisory formula approach	**35 612**	36 958	41 339	**4 159**
	Total credit risk	**742 517**	730 827	691 959	**86 726**
6.	**Counterparty credit risk#**	**7 814**	8 123	10 257	**913**
7.	– Standardised approach	**7 814**	8 123	10 257	**913**
10.	**Credit valuation adjustment**	**8 254**	6 985	7 368	**964**
11.	**Equity positions in banking book under market-based approach†**	**27 901**	25 995	25 201	**3 259**
15.	**Settlement risk**	**–**	–	–	**–**
20.	**Market risk‡**	**24 523**	26 085	24 773	**2 864**
21.	– Standardised approach	**11 252**	9 525	9 707	**1 314**
22.	– Internal model approach	**13 271**	16 560	15 066	**1 550**
24.	**Operational risk**	**137 573**	124 079	124 158	**16 069**
	– Basic indicator approach	**14 697**	14 886	15 356	**1 717**
	– Standardised approach	**25 516**	24 901	24 234	**2 980**
	– Advanced measurement approach	**97 360**	84 292	84 568	**11 372**
25.	**Amounts below the thresholds for deduction (subject to 250% risk weight)**	**23 971**	19 577	17 069	**2 800**
26.	**Floor adjustment**	**6 169**	16 205	10 151	**721**
	Other assets	**28 433**	30 223	29 634	**3 320**
27.	**Total**	**1 007 155**	988 099	940 570	**117 636**

* *Capital requirement calculated at 11.680% of RWA (2018: 11.208%). The minimum requirement excludes the bank-specific capital requirements, but includes the CCyB requirement. The difference to the BCBS base minimum (8%) relates to the buffer add-ons for Pillar 2A, CCyB and capital conservation as prescribed in the Regulations.*

** *The group does not apply the foundation internal ratings-based and the supervisory slotting approaches (rows 3 and 4 of OV1 template).*

\# *The current exposure and standardised methods are applied to counterparty credit risk. The group does not apply the internal model method to counterparty credit risk (row 8 of OV1 template) and there were no other CCR (row 9 of OV1 template). The proposed implementation date for SA-CCR was 1 October 2019, however, this has been delayed until further notice is provided by the PA.*

† *The proposed implementation date for the capital requirements for equity investment in funds was 1 October 2019, however, this has been delayed until further notice is provided by the PA. Rows 12 – 14 of the OV1 template have, therefore, been excluded from this table.*

‡ *There were no switches between trading and banking book during the year (row 23 of OV1 template).*

Further detailed analysis on total credit risk RWA is provided in the following table.

OVERVIEW OF TOTAL CREDIT RWA

	As at 30 June 2019			
	RWA			
R million	Advanced approach	Standardised approach	Total	Capital requirement*
– Corporate, banks and sovereigns	**209 375**	**132 962**	**342 337**	**39 985**
– Small and medium enterprises (SMEs)	**56 390**	**57 762**	**114 152**	**13 333**
– Residential mortgages	**70 954**	**7 881**	**78 835**	**9 208**
– Qualifying revolving retail	**40 656**	**7 915**	**48 571**	**5 673**
– Other retail	**76 912**	**43 918**	**120 830**	**14 113**
– Securitisation exposure	**2 180**	**35 612**	**37 792**	**4 414**
Total credit risk	**456 467**	**286 050**	**742 517**	**86 726**

* *Capital requirement calculated at 11.680% of RWA (2018: 11.208%). The minimum requirement excludes the bank-specific capital requirements, but includes the CCyB requirement. The difference to the BCBS base minimum (8%) relates to the buffer add-ons for Pillar 2A, CCyB and capital conservation as prescribed in the Regulations.*

Capital adequacy position for the group, its regulated subsidiaries and the bank's foreign branches

The group's registered banking subsidiaries must comply with PA regulations and those of their respective in-country regulators, with primary focus placed on Tier 1 and total capital adequacy ratios. It remains the group's principle that entities must be adequately capitalised on a standalone basis. Based on the outcome of detailed stress testing, each entity targets a capital level in excess of the in-country regulatory minimum.

Adequate controls and processes are in place to ensure that each entity is adequately capitalised to meet regulatory and economic capital requirements. Capital generated by subsidiaries/branches in excess of targeted levels is returned to FirstRand, usually in the form of dividends/ return of profits. During the year, no restrictions were experienced on the repayment of such dividends or profits to the group.

The RWA and capital adequacy positions of FirstRand, its regulated subsidiaries and the bank's foreign branches are summarised in the table below.

RWA AND CAPITAL ADEQUACY POSITIONS OF FIRSTRAND, ITS REGULATED SUBSIDIARIES AND THE BANK'S FOREIGN BRANCHES

	As at 30 June			
	2019 IFRS 9			2018 IAS 39
	RWA R million	**Tier 1 %**	**Total capital adequacy %**	Total capital adequacy %
Basel III (PA regulations)				
FirstRand*	**1 007 155**	**12.9**	**15.2**	14.7
FirstRand Bank*,**	**701 648**	**14.0**	**16.8**	16.8
FirstRand Bank South Africa*	**653 180**	**13.8**	**16.8**	16.7
FirstRand Bank London	**46 414**	**11.2**	**12.2**	14.8
FirstRand Bank India	**2 322**	**29.5**	**29.8**	39.9
FirstRand Bank Guernsey#	**219**	**16.7**	**16.7**	15.3
Basel III (local regulations)				
Aldermore Bank	**111 112**	**13.1**	**15.7**	14.5
FNB Namibia†	**29 946**	**17.0**	**19.4**	18.7
Basel II (local regulations)				
FNB Mozambique	**1 865**	**16.8**	**16.8**	13.3
RMB Nigeria	**3 315**	**44.8**	**44.8**	48.1
FNB Botswana	**26 686**	**13.8**	**17.4**	17.9
FNB Tanzania‡	**1 341**	**23.9**	**23.9**	38.6
FNB Swaziland‡	**4 368**	**22.4**	**23.3**	23.4
First National Bank Ghana‡	**1 122**	**98.5**	**99.0**	59.0
Basel I (local regulations)				
FNB Lesotho	**1 069**	**12.6**	**15.1**	18.0
FNB Zambia	**3 784**	**18.6**	**24.2**	22.6

* *Includes unappropriated profits.*

** *Includes foreign branches.*

\# *Trading as FNB Channel Islands.*

† *Transitioned to Basel III during the year under review.*

‡ *Transitioned to Basel II during the year under review.*

INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS

ICAAP is key to the group's risk and capital management processes as it continues to evolve into an integral part of the business decision-making process which is deeply embedded in the group. Best practice, standards and methodologies are adopted on an ongoing basis to assess the overall risk profile of the group, and to embed a responsible risk culture across all levels in the group.

ICAAP impacts the following:

- Strategy and risk appetite.
- Risk assessment and management.
- Forward-looking capital planning:
  - budget and earnings volatility;
  - stress and scenario analysis;
  - informs capital targets; and
  - dividend decisions.
- Performance measurement.
- Recovery planning, being an extension to ICAAP.

A key input into ICAAP is an assessment of economic risk, with the outcome used to assess the group's capital position and targeted level of capitalisation, i.e. higher of economic capital and regulatory capital. Economic capital is also used in strategic capital planning, risk measurement and portfolio management.

The assessment of economic risk aligns with the group's economic capital framework that sets out the following:

- the risk universe;
- consistent standards and measurements for each risk type;
- continuous refinement of risk drivers, sensitivities and correlations;
- transparency and verifiable results, subject to rigorous governance processes; and
- alignment and integration with the group's risk and capital frameworks.

The group's internal view of CET1 comfortably exceeded the economic capital requirements as assessed in the latest ICAAP with a multiple in excess of 1.6x at 30 June 2019.

Funding and liquidity risk

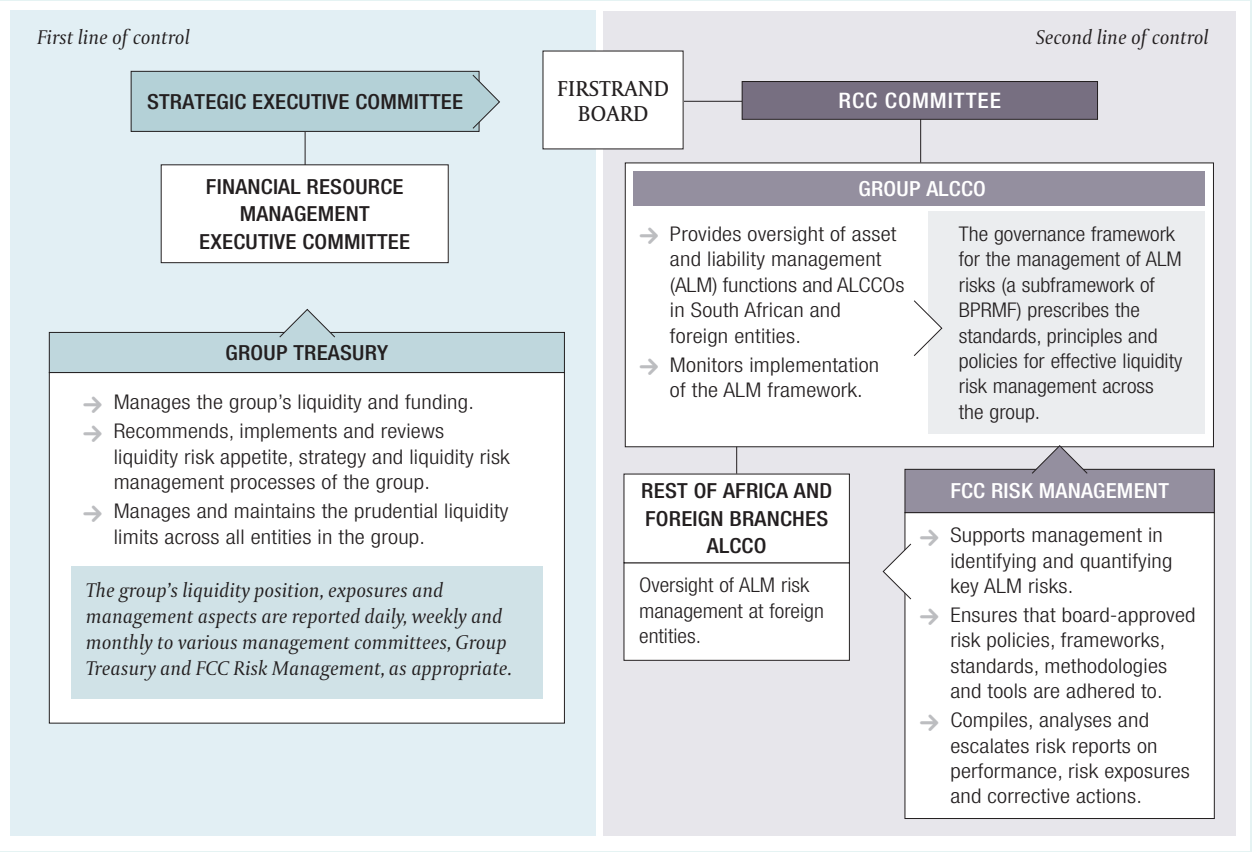
INTRODUCTION AND OBJECTIVES

The group aims to fund its activities in an efficient and flexible manner, from diverse and sustainable funding pools, whilst operating within prudential limits. The group's objective is to maintain and enhance its deposit market share by appropriately pricing and rewarding depositors, thus creating a natural liquidity buffer. As a consequence of the liquidity risk introduced by its business activities across various currencies and geographies, the group's objective is to optimise its funding profile within structural and regulatory constraints to enable businesses to operate in an efficient and sustainable manner.

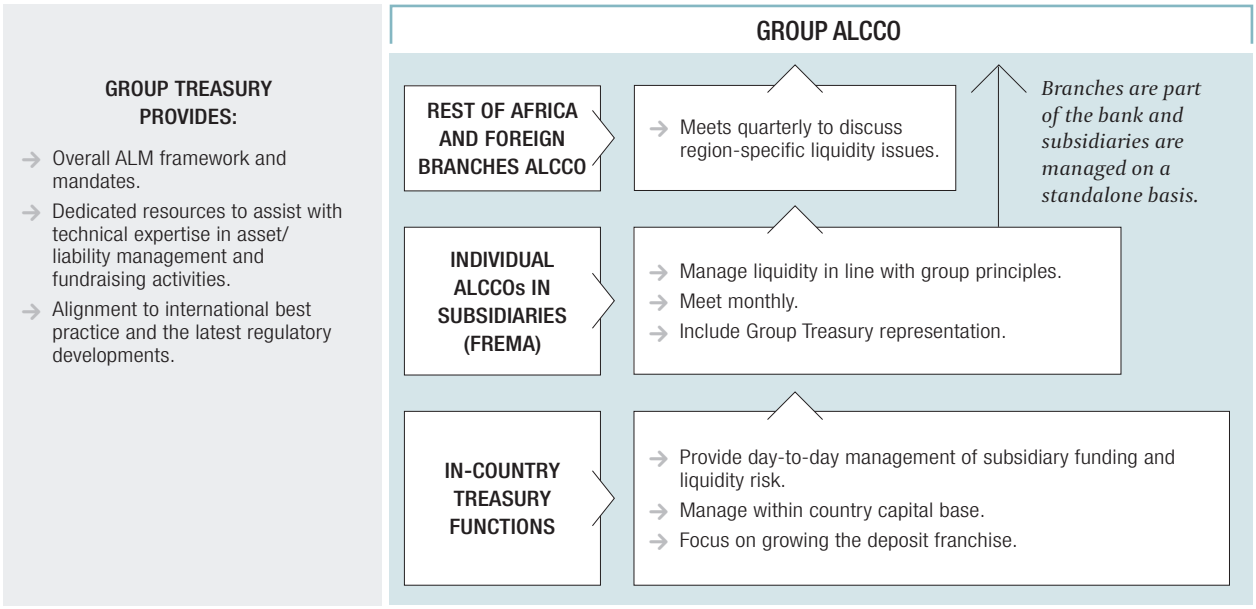
Compliance with the Basel III liquidity ratios influences the group's funding strategy, particularly as it seeks to price appropriately for liquidity on a risk-adjusted basis. The group continues to offer innovative and competitive products to further grow its deposit franchise whilst also optimising its institutional funding profile. These initiatives continue to improve the funding and liquidity profile of the group.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

GROUP AND BANK



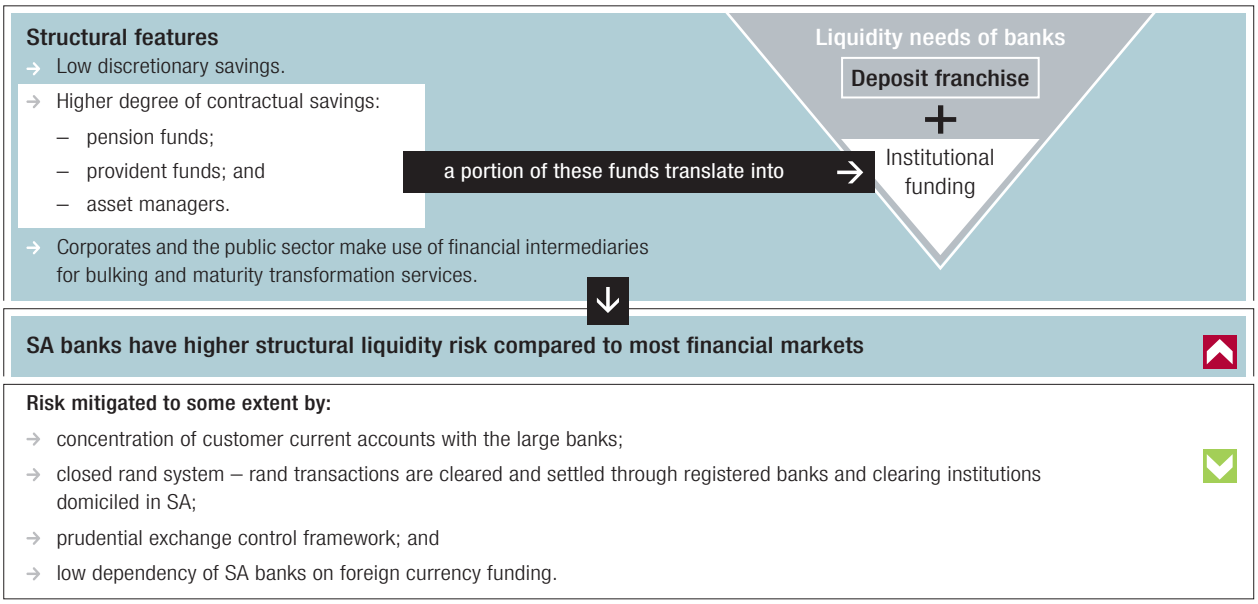
REST OF AFRICA AND FOREIGN BRANCHES



FUNDING MANAGEMENT

The following diagram illustrates the structural features of the South African banking sector and its impact on liquidity risk.

STRUCTURAL FEATURES OF SOUTH AFRICAN BANKING SECTOR

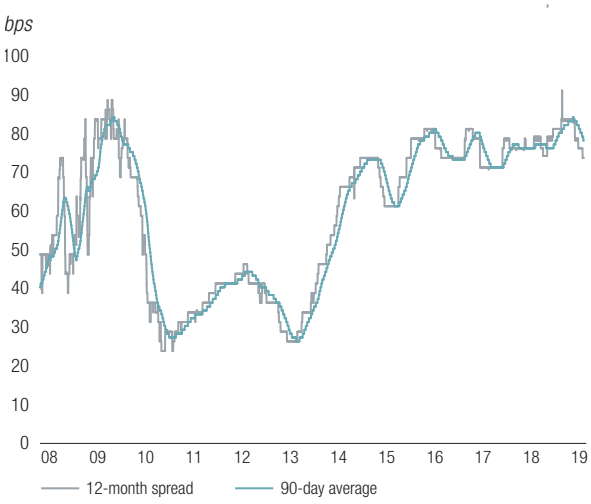


Considering the structural features of the South African market described above, the group's focus remains on achieving an improved risk-adjusted and diversified funding profile, which also enables it to meet Basel III liquidity requirements. Consequently, the group aims to fund the balance sheet in an efficient manner, as set out in its liquidity risk management framework, and within regulatory and rating agency requirements.

In line with the South African banking industry, the group raises a large amount of funding from the institutional market. To maximise efficiency and flexibility in accessing institutional funding opportunities, both domestic and international debt programmes have been established. The group's strategy for domestic vanilla public issuances is to offer benchmark tenor bonds to meet investor requirements and to facilitate secondary market liquidity. This strategy enables the group to identify cost-effective funding opportunities whilst maintaining an understanding of available market liquidity.

The following graph is indicative of the market cost of institutional funding, measured as the spread paid on the bank's 12-month funding instruments. Short-dated funding costs continue to remain elevated, but have moderated over the past six months.

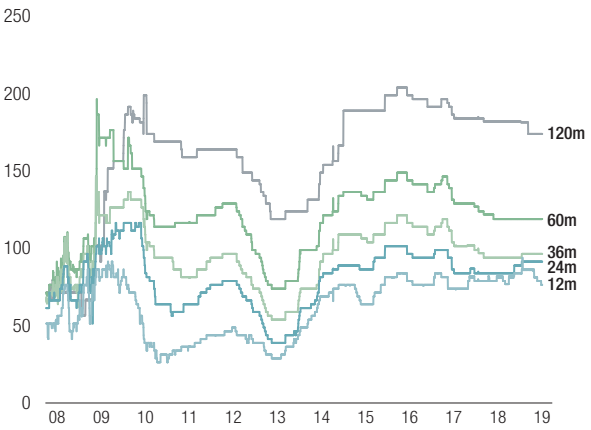
12-MONTH MID-MARKET FUNDING SPREAD



Sources: Bloomberg (RMBP screen) and Reuters.

The following graph illustrates that longer-dated funding spreads remain elevated from a historical perspective, however, since 2016 funding spreads for maturities greater than five years have moderated somewhat.

LONG-TERM FUNDING SPREADS



Sources: Bloomberg (RMBP screen) and Reuters.

The additional liquidity required by banks due to money supply constraints introduced by the LCR, and the central bank's open market operations without a commensurate increase in savings flows, have ultimately resulted in higher funding costs.

Funding measurement and activity

FirstRand Bank, FirstRand's wholly-owned subsidiary and the primary debt-issuing entity in the group, generates a greater proportion of its funding from deposits in comparison to the South African aggregate, but its funding profile also reflects the structural features described previously.

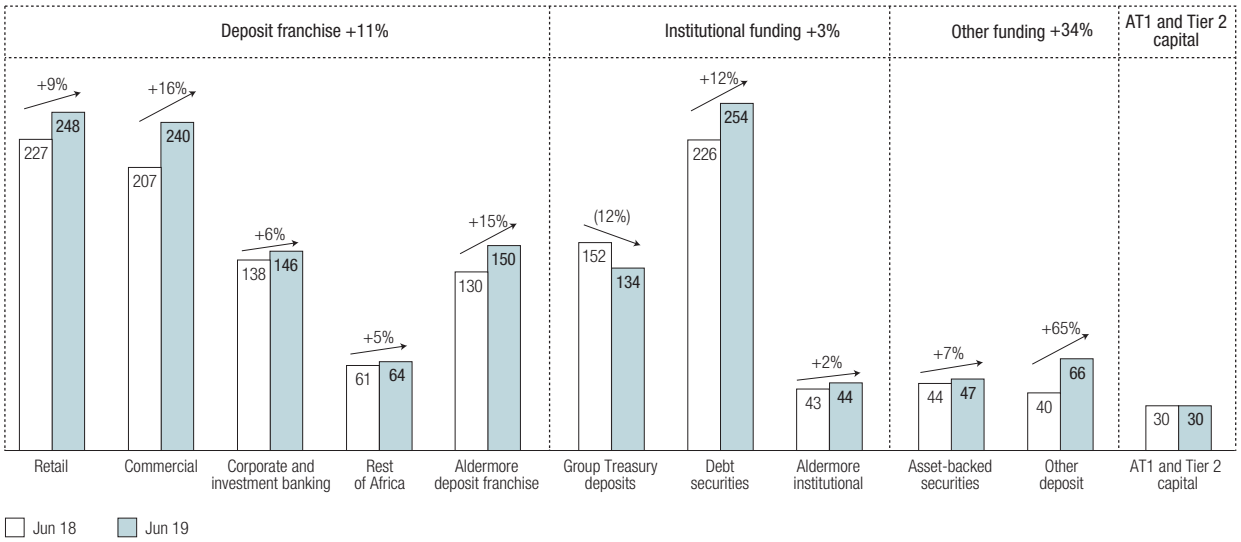
The group manages its funding profile by source, counterparty type, market, product and currency. The deposit franchise is the most efficient and stable source of funding, representing 60% of total group funding liabilities at 30 June 2019 (2018: 59%).

The group's primary focus remains on growing its deposit franchise across all segments, with continued emphasis on savings and investment products. The group continues to develop and refine its product offering to attract a greater proportion of available liquidity with improved risk-adjusted pricing for source and behaviour. In addition to client deposits, the group accesses the domestic money markets daily and, from time to time, the capital markets, to fund its operations. The group issues various capital and funding instruments in the capital markets on an auction and reverse-enquiry basis, with strong support from domestic and international investors.

The following graph provides a segmental analysis of the group's funding base.

FUNDING PORTFOLIO GROWTH

R billion



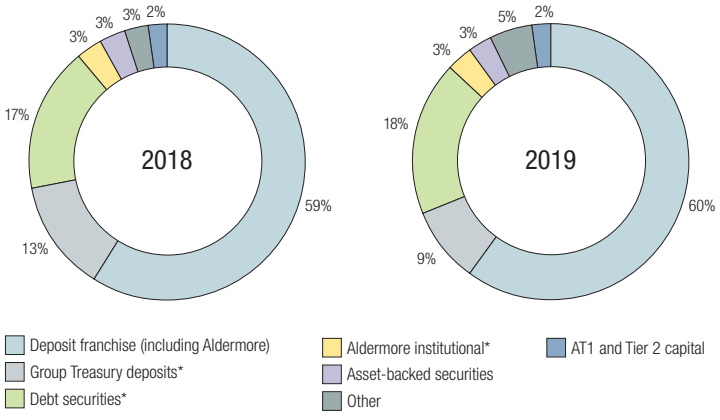
Note 1: Percentage change is based on actual, not rounded, numbers shown in the bar graphs above.

Note 2: The above graph is completed using the group segmental reporting split based on funding product type. This view primarily highlights the group's strength in raising deposits across segments, as well as diversification of the group's funding from a counterparty perspective.

Note 3: Asset-backed securities include Aldermore's securitisation transactions.

The graphs below show that the group's funding mix has remained relatively stable over the last year.

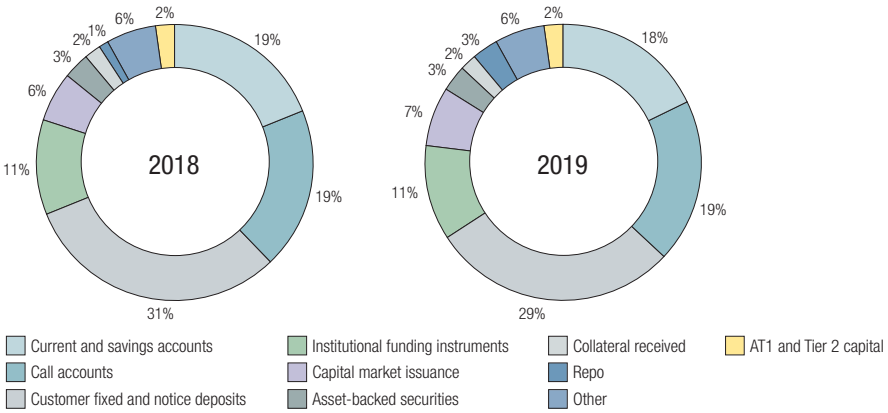
FUNDING MIX



** 2018 has been restated to show Aldermore separately. This provides greater granularity of the funding mix.*

The following graph illustrates the group's funding instruments by type.

GROUP'S FUNDING ANALYSIS BY INSTRUMENT TYPE

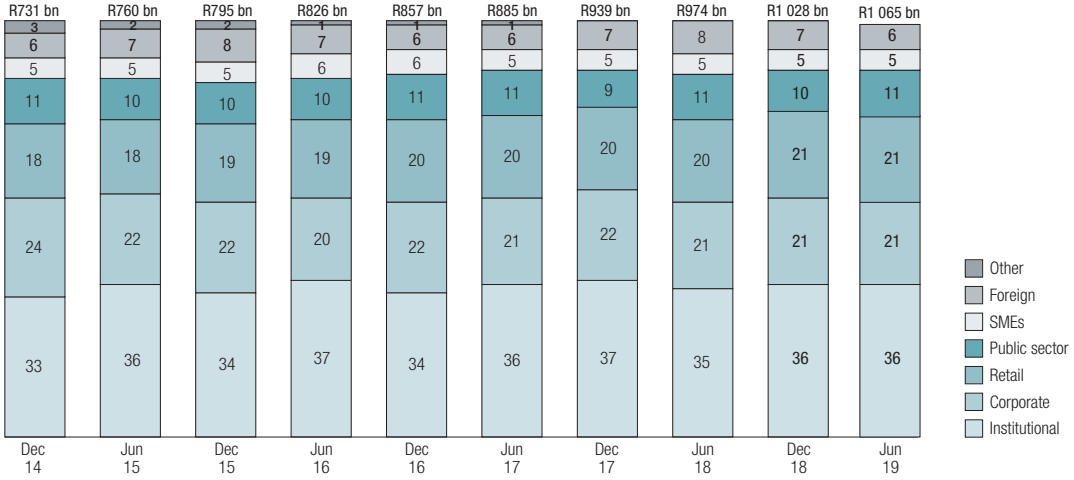


The group's strategy to grow its deposit and transactional banking franchise results in a significant proportion of contractually short-dated funding. As these deposits are anchored to clients' cyclical transactional and savings requirements and, given the balance granularity created by individual customers' independent client activity, the resultant liquidity risk profile is improved.

The table below provides an analysis of the bank's (excluding foreign branches) funding sources per counterparty type.

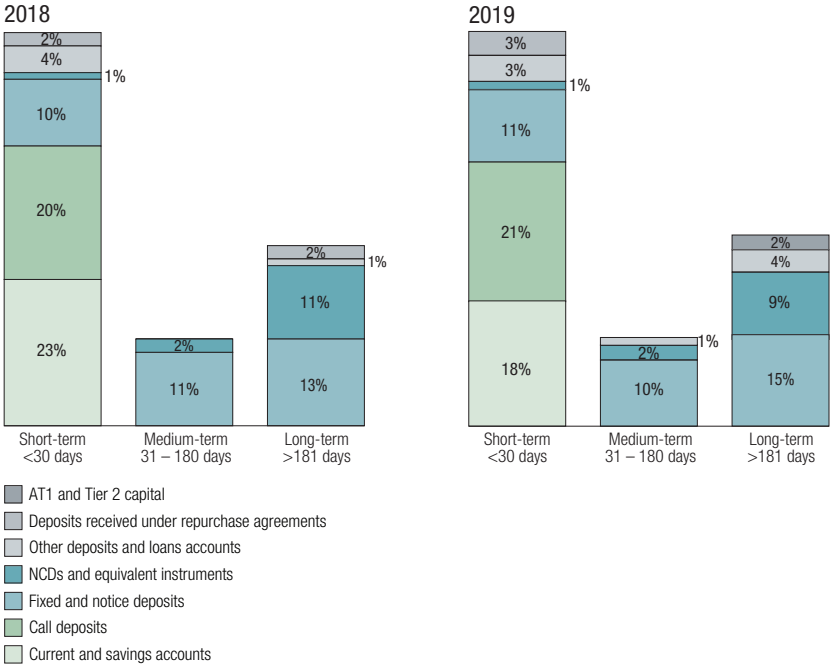
	As at 30 June				
	2019 IFRS 9				2018 IAS 39
% of funding liabilities	**Total**	**Short-term**	**Medium-term**	**Long-term**	Total
Institutional funding	**36.1**	**10.7**	**3.4**	**22.0**	35.0
Deposit franchise	**63.9**	**50.3**	**8.0**	**5.6**	65.0
Corporate	**20.3**	**17.2**	**2.3**	**0.8**	20.6
Retail	**20.8**	**16.2**	**3.2**	**1.4**	20.3
SMEs	**5.3**	**4.4**	**0.6**	**0.3**	5.3
Governments and parastatals	**11.1**	**9.3**	**1.3**	**0.5**	11.0
Foreign	**6.3**	**3.2**	**0.6**	**2.5**	7.8
Other	**0.1**	**–**	**–**	**0.1**	–
Total	**100.0**	**61.0**	**11.4**	**27.6**	100.0

FUNDING ANALYSIS FOR FIRSTRAND BANK BY SOURCE*



* *Excludes foreign branches.*

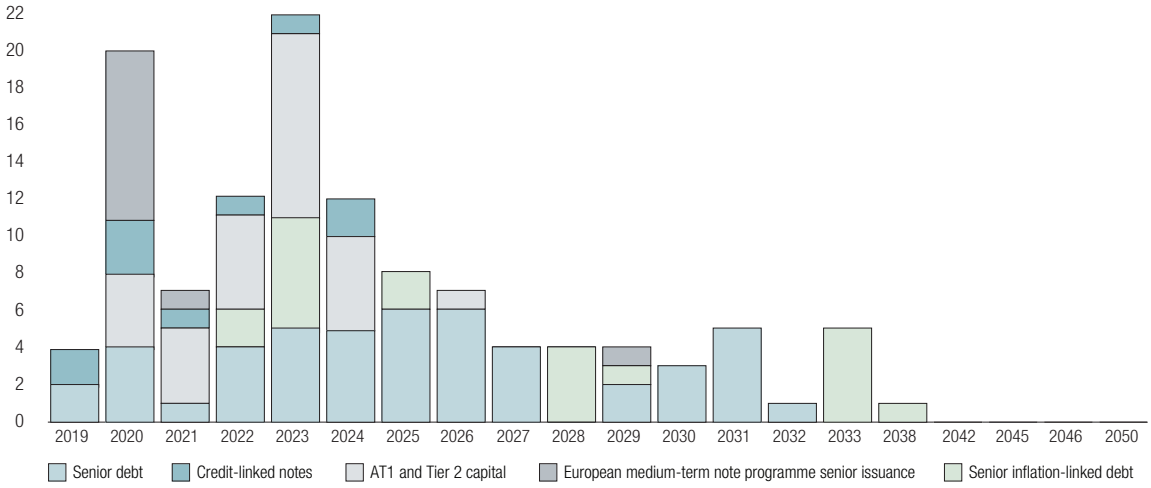
GROUP'S FUNDING LIABILITIES BY INSTRUMENT TYPE AND TERM



The maturity profile of the bank's capital market instruments is depicted in the following chart. The bank does not have significant instrument-specific concentration risk in any one year and seeks to efficiently issue across the maturity spectrum, taking investor demand into account.

MATURITY PROFILE OF CAPITAL MARKET INSTRUMENTS OF FIRSTRAND BANK*

R billion



* *Includes foreign branches.*

Funds transfer pricing

The group operates a funds transfer pricing framework which incorporates liquidity costs and benefits as well as regulatory friction costs into product pricing and performance measurement for all on- and off-balance sheet activities. Where fixed-rate commitments are undertaken (fixed-rate loans or fixed-rate deposits), transfer pricing will also include the fixed interest rate transfer. Businesses are effectively incentivised to:

- enhance and preserve funding stability;
- ensure that asset pricing is aligned to liquidity risk appetite;
- reward liabilities in accordance with behavioural characteristics and maturity profile; and
- manage contingencies with respect to potential funding drawdowns.

The active management of foreign currency liquidity risk remains a strategic focus given the group's foreign currency asset strategy.

FOREIGN CURRENCY BALANCE SHEET

Funding structure of foreign operations

In line with the group's strategy to build strong in-country deposit franchises, subsidiaries are categorised in terms of their stage of development from greenfields start-ups to mature subsidiaries and can be characterised, from a funding perspective, as follows:

- Mature deposit franchises – all assets are largely funded in-country. The pricing of funding is determined via in-country funds transfer pricing, which is already in place.
- Growing deposit franchises – assets are first funded in-country at relevant funds transfer pricing rates. Any excess over and above in-country capacity is funded by the group's dollar funding platforms. This is a temporary arrangement, which allows these entities to develop adequate in-country deposit bases.
- No deposit franchises – all activities are funded by the group's dollar funding platforms.

In all categories, the pricing of funding is determined from established in-country funds transfer pricing.

Group funding support

Any funding provided by the group is constrained by the appetite set independently by the credit risk management committee or the board. In arriving at limits, the credit risk management committee considers the operating jurisdiction and any sovereign risk limits that should apply. Group Treasury, therefore, must ensure that any resources provided to foreign entities are priced appropriately.

MotoNovo

The acquisition of Aldermore alleviates some pressure on the group's foreign currency funding capacity. Now that MotoNovo has been integrated with Aldermore, it is supported by Aldermore's funding platform. All new business will be funded via a combination of on-balance sheet deposits, wholesale and structured funding. MotoNovo's back book (originated prior to May 2019) forms part of the bank's London branch and remains funded through existing funding mechanisms. It will, over time, be run down. Consequently, the funding capacity currently allocated to MotoNovo can ultimately be redeployed into other growth strategies.

Aldermore

Aldermore actively follows a diversified and flexible funding strategy and is predominantly funded by retail and business customer deposits, and bespoke corporate deposits. These account for approximately 75% of total funding with the deposit franchise totalling £8.3 billion at 30 June 2019.

Aldermore's funding strategy is complemented by its continued access to wholesale funding. Notwithstanding the end of the Bank of England's Term Funding Scheme, Aldermore returned to the securitisation market in October 2018 with its second prime residential mortgage-backed securitisation, Oak 2. Aldermore continues to access the capital markets as and when opportunities arise to optimise its funding profile and cost of funds.

Aldermore's liquid asset composition remains prudent with an LCR well in excess of the regulatory minimum, and liquidity risk position managed to more stringent internal parameters. Given the Brexit uncertainty, there has been a proactive approach to reduce exposures in bonds and place excess cash with the Bank of England, which accounts for 28% of Aldermore's liquidity buffer.

Risk management approach

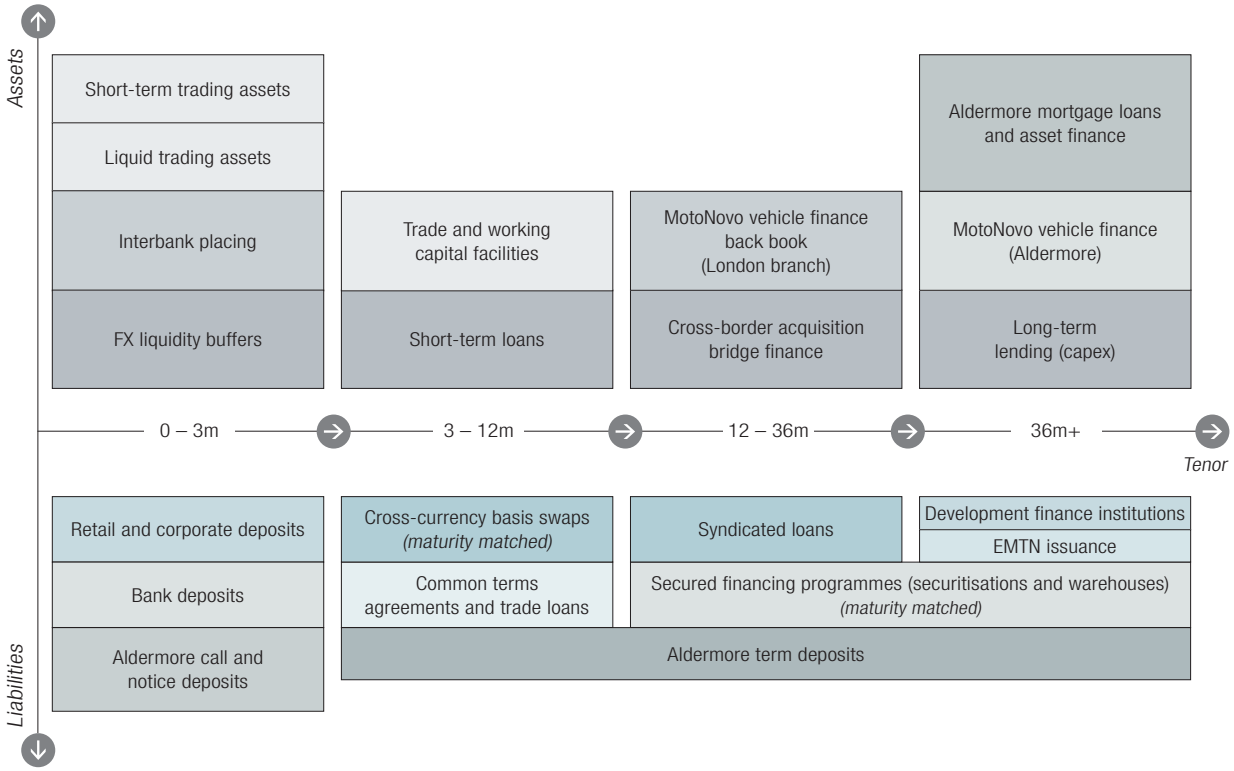
The group seeks to avoid undue liquidity risk exposure and thus maintains liquidity risk within the risk appetite approved by the board and risk committee. As an authorised dealer, the bank is subject to foreign currency macro-prudential limits as set out in the *Exchange Control Circular 6/2010* issued by the SARB. From a risk management perspective, the group utilises its own foreign currency balance sheet measures based on its economic risk assessment and has set internal limits below those allowed by the macro-prudential limits framework. This limit applies to the group's exposure to branches, foreign currency assets and guarantees.

FirstRand's foreign currency activities, specifically lending and trade finance, have steadily increased over the past few years. It is, therefore, important to have a sound framework for the assessment and management of foreign currency external debt, given the inherent vulnerabilities and liquidity risks associated with cross-border financing.

Philosophy on foreign currency external debt

The key determinants of an institution's ability to fund and refinance foreign currency exposures is sovereign risk and its associated external financing requirement. The group's framework for the management of external debt considers sources of sovereign risk, foreign currency funding capacity, and the macroeconomic vulnerabilities of South Africa. To determine South Africa's foreign currency funding capacity, the group takes into account the external debt of all South African entities (private and public sector, and financial institutions), as all these entities utilise the South African system's capacity, namely confidence and export receipts. The group thus employs a self-imposed structural borrowing limit and a liquidity risk limit more onerous than that allowed by regulations.

GRAPHICAL REPRESENTATION OF THE FOREIGN CURRENCY BALANCE SHEET



LIQUIDITY RISK MANAGEMENT

Overview

Liquidity risk is a consequential risk that may result from other risks, as demonstrated by the reduction in liquidity in many international markets as a consequence of the 2008/9 global credit crisis. The group, therefore, continuously monitors and analyses the potential impact of other risks and events on its funding and liquidity position to ensure that the group's activities preserve and improve funding stability. This ensures that the group is able to operate through periods of stress when access to funding could be constrained.

The group recognises two types of liquidity risk:

Funding liquidity risk – the risk that a bank will not be able to effectively meet current and future cash flow and collateral requirements without negatively affecting its normal course of business, financial position or reputation.

Market liquidity risk – the risk that market disruptions or lack of market liquidity will cause a bank to be unable (or able, but with difficulty) to trade in specific markets without affecting market prices significantly.

Mitigation of market and funding liquidity risks is achieved via contingent liquidity risk management. Buffer stocks of high-quality, highly liquid assets are held either to be sold into the market or to provide collateral for loans to cover any unforeseen cash shortfall that may arise.

The group's approach to liquidity risk management distinguishes between structural, daily and contingency liquidity risk management across all currencies, and various approaches are employed in the assessment and management of these on a daily, weekly and monthly basis as illustrated in the following table.

LIQUIDITY RISK MANAGEMENT APPROACHES

STRUCTURAL LIQUIDITY RISK	DAILY LIQUIDITY RISK	CONTINGENCY LIQUIDITY RISK
Managing the risk that structural, long-term, on- and off-balance sheet exposures cannot be funded timeously or at reasonable cost.	Ensuring that intraday and day-to-day anticipated and unforeseen payment obligations can be met by maintaining a sustainable balance between liquidity inflows and outflows.	Maintaining a number of contingency funding sources to draw upon in times of economic stress.
→ Setting liquidity risk tolerance. → Setting liquidity strategy. → Ensuring substantial diversification of funding sources. → Assessing the impact of future funding and liquidity needs taking into account expected liquidity shortfalls or excesses. → Setting the approach to liquidity management in different currencies and countries. → Ensuring adequate liquidity ratios. → Ensuring an appropriate structural liquidity gap. → Maintaining a funds transfer pricing methodology and process.	→ Managing intraday liquidity positions. → Managing daily payment queue. → Monitoring net funding requirements. → Forecasting cash flows. → Performing short-term cash flow analysis for all currencies (individually and in aggregate). → Managing intragroup liquidity. → Managing central bank clearing. → Managing net daily cash positions. → Managing and maintaining market access. → Managing and maintaining collateral.	→ Managing early warning and key risk indicators. → Performing stress testing, including sensitivity analysis and scenario testing. → Maintaining product behaviour and optionality assumptions. → Ensuring that an adequate and diversified portfolio of liquid assets and buffers are in place. → Maintaining the contingency funding plan.

Stress testing and scenario analysis

Regular and rigorous stress tests are conducted on the funding profile and liquidity position as part of the overall stress testing framework with a focus on:

- quantifying the potential exposure to future liquidity stresses;
- analysing the possible impact of economic and event risks on cash flows, liquidity, profitability and solvency position; and
- proactively evaluating the potential secondary and tertiary effects of other risks on the group.

Liquidity contingency planning

Frequent volatility in funding markets and the fact that financial institutions can, and have, experienced liquidity problems even during benign economic conditions highlight the importance of quality liquidity risk and contingency management processes.

The group's ability to meet all of its daily funding obligations and emergency liquidity needs is of paramount importance and, in order to ensure that this is always adequately managed, the group maintains a liquidity contingency plan.

The objective of liquidity contingency planning is to achieve and maintain funding levels in a manner that allows the group to emerge from a potential funding crisis with its reputation intact and maintain its financial position for continuing operations. The plan is expected to:

- support effective management of liquidity and funding risk under stressed conditions;
- establish clear roles and responsibilities in the event of a liquidity crisis; and
- establish clear invocation and escalation procedures.

The liquidity contingency plan provides a pre-planned response mechanism to facilitate swift and effective responses to contingency funding events. These events may be triggered by financial distress in the market (systemic) or bank-specific events (idiosyncratic) which may result in the loss of funding sources.

The plan is reviewed annually and tested regularly via a group-wide liquidity stress simulation exercise to ensure the document remains up to date, relevant and familiar to all key personnel within the group who have a role to play, should it ever experience an extreme liquidity stress event.

LIQUIDITY RISK POSITION

The following table provides details on the group's available sources of liquidity.

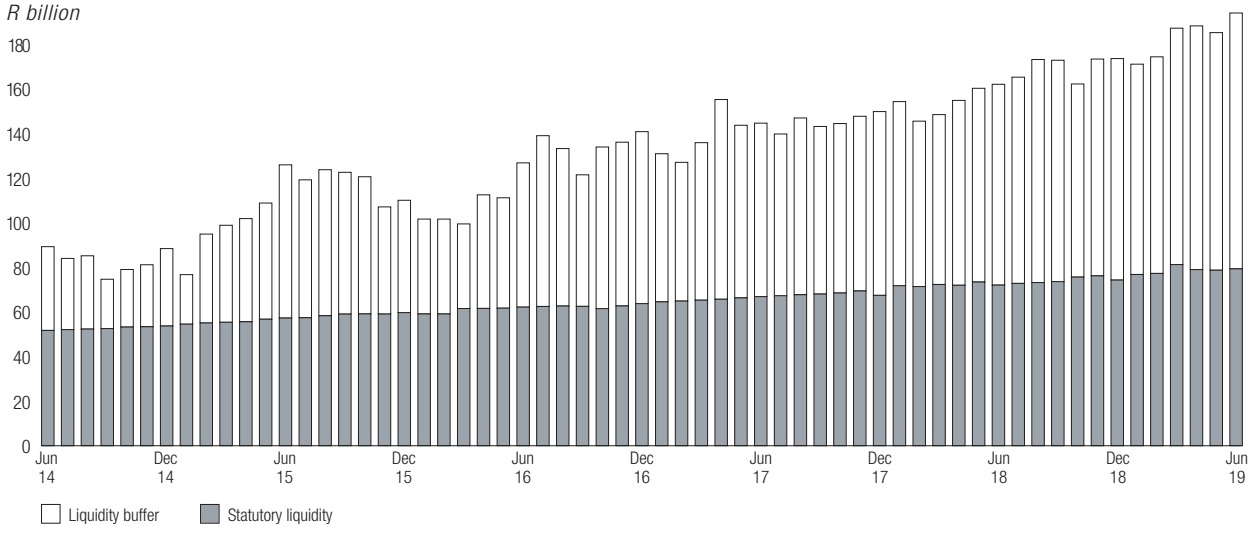
COMPOSITION OF LIQUID ASSETS

	As at 30 June	
	2019 IFRS 9	2018 IAS 39
R billion		
Cash and deposits with central banks	**43**	41
Government bonds and bills	**151**	120
Other liquid assets	**55**	42
Total liquid assets	**249**	203

Liquidity buffers are actively managed via the group's pool of high-quality liquid assets that are available as protection against unexpected liquidity stress events or market disruptions, and to facilitate the changing liquidity needs of the operating businesses. The composition and quantum of available liquid resources are defined behaviourally, considering both the funding liquidity-at-risk and the market liquidity depth of these resources. In addition, adaptive overlays to liquidity requirements are derived from stress testing and scenario analysis of cash inflows and outflows.

The group has continued to build its liquid asset holdings in accordance with asset growth, risk appetite and regulatory requirements.

LIQUIDITY BUFFER AND STATUTORY LIQUIDITY REQUIREMENTS OF FRB SA



Liquidity ratios for the group and bank at 30 June 2019 are summarised below.

	Group*		Bank*	
	LCR**	**NSFR**	**LCR****	**NSFR**
Regulatory minimum	100%	100%	100%	100%
Actual	122%	118%	133%	117%

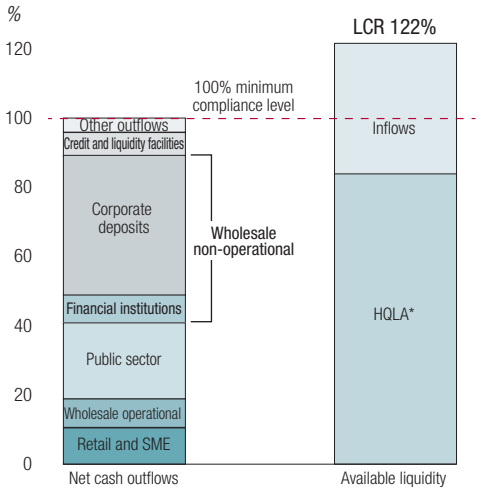
* *The consolidated LCR and NSFR for the group includes the bank's operations in South Africa, and all registered banks and foreign branches within the group. The bank's LCR and NSFR reflects its operations in South Africa only.*

** *LCR is calculated as a simple average of 91 calendar days' LCR observations over the preceding quarter.*

As of 1 January 2019, the LCR requirement stepped up to the end-state minimum of 100% from 90%.

The following graph illustrates the group's LCR position at 30 June 2019.

GROUP LCR



* *HQLA held by subsidiaries and foreign branches in excess of the required LCR minimum of 100% have been excluded on consolidation as per Directive 11 of 2014.*

Funding from institutional clients is a significant contributor to the group's net cash outflows measured under the LCR. Other significant contributors to cash outflows are corporate funding and off-balance sheet facilities granted to clients. The group continues to execute on strategies to increase funding sourced through its deposit franchise and to reduce reliance on institutional funding sources, as well as to offer facilities more efficiently.

Standardised disclosures

In terms of Regulation 43 of the Regulations, the following additional standardised disclosures are required:

- Key prudential metrics (at consolidated group level).
- Capital:
  - composition of regulatory capital;
  - reconciliation of regulatory capital to balance sheet; and
  - main features of regulatory capital instruments.
- Macroprudential supervisory measures:
  - Geographical distribution of credit exposures used in the countercyclical capital buffer.
- Leverage:
  - summary comparison of accounting assets vs leverage ratio exposure measure; and
  - leverage ratio standardised disclosure template.
- Liquidity:
  - LCR; and
  - NSFR.

Refer to www.firstrand.co.za/investors/basel-pillar-3-disclosure/.

Scan with your smart device's QR code reader to access the standardised disclosure templates on the group's website.

Regulatory update

BASEL III REFORMS	The BCBS finalised the Basel III reforms in December 2017, with a specific focus on reducing the variability of RWA. The BCBS has agreed on a five-year transitional period, beginning 1 January 2022. The 2017 reforms aim to address weaknesses identified during the global financial crisis, i.e. credibility of the risk-based capital framework, and introducing constraints on the estimates banks use within internal models for regulatory capital purposes. The PA further issued *Guidance Note 6 of 2018, Proposed implementation dates in respect of specified regulatory reforms (Guidance Note 6)*, which includes the proposed implementation dates of the outstanding Basel III regulatory reforms. The impact on the group capital position depends on the final implementation by the PA given a level of national discretion. The group continues to participate in the BCBS quantitative impact studies to assess and understand the impact of such reforms. In terms of Guidance Note 6, the proposed implementation date for the following reforms was 1 October 2019, however, these have been delayed until further notice is provided by the PA: → Standardised approach for counterparty credit risk. → Capital requirement for banks' exposures to central counterparties. → Capital requirements for equity investment in funds. The proposed implementation date for the revised securitisation framework and large exposures framework is April 2020.
LCR	From 2019, South African banks are required to meet an LCR requirement of 100%. To fully comply with the LCR requirement, the group holds a diversified pool of available HQLA, which is constrained by the limited availability of these assets in the South African market. To assist the industry to comply with the LCR, the PA introduced the committed liquidity facility (CLF). For 2019, the PA has continued to provide a CLF for the industry. The PA's approach to the CLF and other related conditions for the period from 1 December 2018 to 30 November 2019 is detailed in *Guidance Note 4 of 2018, Continued provision of a committed liquidity facility by the South African Reserve Bank to banks (Guidance Note 4)*. *Guidance Note 5 of 2019, Continued provision of a committed liquidity facility by South African Reserve Bank to banks (Guidance Note 5)*, was released on 27 August 2019, and provides revised guidelines and conditions relating to the continued provision of the CLF, specifically covering the period from 1 December 2019 to 30 November 2020. The guidance note also reiterates the SARB's intention to phase out the CLF by 1 December 2021. The CLF available to banks will begin reducing from 1 December 2019 and will be withdrawn after 1 December 2021. The PA will, in consultation with banks, investigate possible alternatives to the CLF. There can be no certainty that an alternative liquidity facility will be agreed upon or instituted.
NSFR	The NSFR is a structural balance sheet ratio focusing on promoting a more resilient banking sector. The ratio calculates the amount of available stable funding (ASF) relative to the amount of required stable funding (RSF), and came into effect from 1 January 2018. *Directive 8 of 2017, Matters related to the net stable funding ratio* (which replaced *Directive 4 of 2016*), set out the elements of national discretion exercised by the PA in relation to the calibration of the NSFR framework for South Africa. The PA, after due consideration and noting that rand funding is contained in the financial system, concluded it appropriate to apply a 35% ASF factor to deposits from financial institutions with a residual maturity of less than six months. In line with several other international regulators, the PA also provided clarity on the alignment of the LCR and NSFR, applying a 5% RSF factor to the assets net of its haircut eligible for CLF purposes. These changes are anchored in the assessment of the true liquidity risk and greatly assist the South African banking sector in meeting the NSFR requirements. The above-mentioned directives continue to remain in effect.
FINANCIAL CONGLOMERATES	The Financial Sector Regulation Act further empowers the PA to designate a group of companies as a financial conglomerate and also regulate and supervise such designated financial conglomerates. Draft standards provide an early signal to the industry and affected stakeholders on the approach to the classification, regulation and supervision of designated financial conglomerates. The expected implementation date for the standards is 2019/2020.

Credit risk

INTRODUCTION AND OBJECTIVES

Credit risk is the risk of loss due to the non-performance of a counterparty in respect of any financial or other obligation. For fair value portfolios, the definition of credit risk is expanded to include the risk of losses through fair value changes arising from changes in credit spreads. Credit risk also includes credit default risk, pre-settlement risk, country risk, concentration risk and securitisation risk.

Credit risk management across the group is split into three distinct portfolios, which are aligned to customer profiles. These portfolios are retail, commercial and corporate:

- retail credit is offered by FNB, WesBank and Aldermore to individuals and SMEs with a turnover of up to R12.5 million;
- commercial credit focuses on relationship banking offered by FNB and WesBank to companies that are mainly single-banked; and
- corporate credit is offered by RMB and WesBank to large corporate multi-banked customers.

As advances are split across the operating businesses, default risk is allocated to the income-receiving portfolio.

The goal of credit risk management is to maximise the group's measure of economic profit, NIACC, within acceptable levels of earnings volatility by maintaining credit risk exposure within acceptable parameters.

Credit risk is one of the core risks assumed as part of achieving the group's business objectives. It is the most significant risk type in terms of regulatory and economic capital requirements. Credit risk management objectives are twofold:

Risk control: Appropriate limits are placed on the assumption of credit risk and steps taken to ensure the accuracy of credit risk assessments and reports. Deployed and central credit risk management teams fulfil this task.

Management: Credit risk is taken within the constraints of the group's risk/return and credit risk appetite framework. The credit portfolio is managed at an aggregate level to optimise the exposure to this risk. Business units and deployed risk functions, overseen by the group credit risk management function in ERM and relevant board committees, fulfil this role.

Based on the group's credit risk appetite, as measured on ROE, NIACC and volatility-of-earnings basis, credit risk management principles include holding the appropriate level of capital and pricing for risk on an individual and portfolio basis. The scope of credit risk identification and management practices across the group, therefore, spans the credit value chain, including risk appetite, credit origination strategy, risk quantification and measurement, as well as collection and recovery of delinquent accounts.

Credit risk is managed through the implementation of comprehensive policies, processes and controls to ensure a sound credit risk management environment with appropriate credit granting, administration, measurement, monitoring and reporting of credit risk exposure.

Credit risk appetite measures are set in line with overall risk appetite. The aim is to deliver an earnings profile that will perform within acceptable levels of volatility determined by the group's overall risk appetite. In setting credit risk appetite measures:

- credit risk appetite is aligned to the overall group risk appetite;
- credit risk appetite is determined using both a top-down group credit risk appetite and an aggregated bottom-up assessment of the business unit-level credit risk appetites; and
- stress testing is used to enable the measurement of financial performance and the credit volatility profile of the different credit business units at a portfolio, segment, operating business and ultimately diversified group-wide level.

Formulated business unit-level credit risk appetite statements are annually reviewed and approved, and risk limits are reported quarterly to and monitored by business unit credit or executive committees and the relevant portfolio credit policy and risk appetite approval committees (subcommittee of the group credit risk management committee). In the credit risk appetite process, ERM group credit risk management is responsible for:

- setting the requirements in the credit risk appetite framework;
- articulating a top-down group credit risk appetite statement;
- assessing alignment between the top-down statement with aggregation of the individual business unit credit risk appetite statements;
- jointly with credit portfolio heads, reporting risk appetite breaches to the FirstRand credit risk management committee; and
- jointly with the operating business CROs, reporting risk appetite breaches to the RCC committee.

Types of credit risk limits are outlined below.

BUSINESS UNIT LIMITS	
Counterparty limits	Borrower's risk grades are mapped to the FirstRand rating scale.
Collateral limits	For secured loans, limits are based on collateral profiles, e.g. loan-to-value bands.
Capacity limits	Measures of customer affordability.
Concentration limits	Limits for concentrations to, for example, customer segments or high collateral risk.
PORTFOLIO-LEVEL LIMITS	
Additional limits for subportfolios subject to excessive loss volatility.	

YEAR UNDER REVIEW AND FOCUS AREAS

YEAR UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
→ Continued to monitor the sovereign rating outlook and ratings of associated entities with proactive revisions, where required. → Performed ongoing validation of IFRS 9 models and continued to implement associated refinements. → Aligned credit origination strategies to the group's macroeconomic outlook with reference to low economic growth and lack of employment growth. → Continued to roll out data architecture refinements related to BCBS 239 to further enhance group credit risk data aggregation and reporting. → Continued to focus on and strengthen credit risk management disciplines across the group's subsidiaries in the rest of Africa.	→ Ensure comprehensive programme structure in place to manage adoption of Basel III reforms. → Leverage BCBS 239 activities to integrate credit risk aggregation and reporting, and credit risk stress testing activities. → Monitor changes to credit portfolio composition and assess the need for additional prudential limits. → Continue to focus on the validation and refinement of IFRS 9 models (which came into effect on 1 July 2018).

Credit risk reporting

Reporting of credit risk information follows the credit governance structure illustrated on the next page. The credit portfolio committees (retail, commercial and wholesale) report to the FirstRand credit risk management committee on the risk profile of the advances in each portfolio on a biannual basis. These reports include a review of portfolio trends and quality of new business originated to enable an aggregated credit portfolio view for the group.

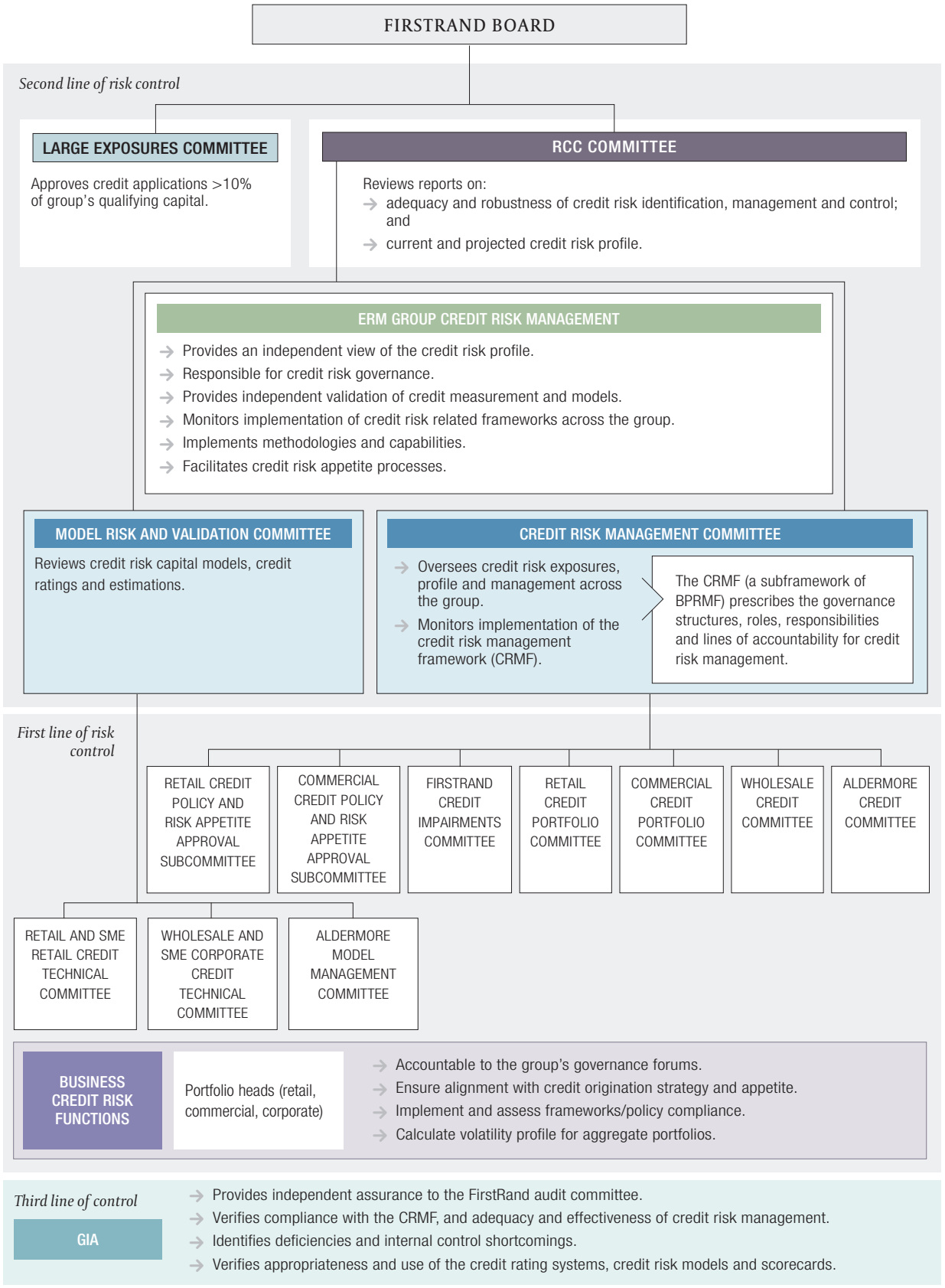
Each quarter ERM provides the RCC committee with an aggregated credit risk profile report of each portfolio with inputs from credit portfolio reports and business CRO reports. It includes:

→ an overview of key credit financial indicators;
→ significant credit observations from the respective credit portfolios, such as risk appetite breaches; and
→ significant regulatory and credit model-related issues.

Business CROs report quarterly on the credit risk profile and include a high-level overview of advances split by portfolio to business risk and executive committees.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

CREDIT RISK GOVERNANCE STRUCTURE



CREDIT ASSETS

CREDIT ASSETS BY TYPE, SEGMENT AND PA APPROACH

	As at 30 June				
	2019 IFRS 9				2018 IAS 39
		AIRB approach	Standardised approach subsidiaries and foreign branches		
R million	Total	FRB SA	Regulated banking entities in the rest of Africa	Other subsidiaries and foreign branches	Total
On-balance sheet exposures	**1 514 795**	**1 079 365**	**95 354**	**340 076**	1 390 746
Cash and short-term funds	**93 266**	**69 410**	**8 847**	**15 009**	87 592
– Money at call and short notice	**53 283**	**43 942**	**3 246**	**6 095**	50 612
– Balances with central banks	**39 983**	**25 468**	**5 601**	**8 914**	36 980
Gross advances*	**1 239 914**	**882 030**	**65 630**	**292 254**	1 140 062
Less: impairments**	**34 162**	**26 483**	**4 028**	**3 651**	18 835
Net advances	**1 205 752**	**855 547**	**61 602**	**288 603**	1 121 227
Debt investment securities (excluding non-recourse investments)#	**215 777**	**154 408**	**24 905**	**36 464**	181 927
Off-balance sheet exposures	**188 517**	**157 846**	**11 252**	**19 419**	177 896
Total contingencies†	**47 006**	**41 292**	**4 326**	**1 388**	47 658
– Guarantees	**38 273**	**33 571**	**3 677**	**1 025**	36 977
– Letters of credit	**8 733**	**7 721**	**649**	**363**	10 681
Irrevocable commitments	**136 580**	**111 623**	**6 926**	**18 031**	126 631
Credit derivatives	**4 931**	**4 931**	**–**	**–**	3 607
Total	**1 703 312**	**1 237 211**	**106 606**	**359 495**	1 568 642

* *The business split of gross advances is provided in the CR1: Credit quality of assets table.*

** *Impairments include expected credit loss on both on- and off-balance sheet exposures.*

Debt investment securities are net of allowances and impairments.

† *Include acceptances.*

CREDIT QUALITY OF ASSETS

The group adopted IFRS 9 in the year under review. IFRS 9 introduces a new model for the recognition of impairment losses, namely the expected credit loss (ECL) model. The ECL model considers the significant changes to assets credit risk and the expected loss that will arise in the event of default. In determining whether an impairment loss should be recognised, the group makes judgements as to whether there is observable data indicating a measurable decrease in the estimated future cash flows from a portfolio of loans. The objective of the measurement of an impairment loss is to produce a quantitative measure of the group's credit risk exposure.

The group adopted the PD/LGD approach for the calculation of ECL for advances. The ECL is based on an average of three macroeconomic scenarios incorporating a base scenario, upside scenario and downside scenario, weighted by the probability of occurrence. Regression modelling techniques are used to determine which borrower and transaction characteristics are predictive of certain behaviours, based on relationships observed in historical data related to the group of accounts to which the model will be applied. This results in the production of models that are used to predict impairment parameters (PD, LGD and EAD) based on the predictive characteristics identified through the regression process.

Impairment of financial assets

Adequacy of impairments is assessed through the ongoing review of the quality of credit exposures in line with IFRS 9 requirements. Individual advances are classified into one of the following categories and an impairment allowance recognised accordingly:

Credit risk has not increased significantly since initial recognition (stage 1)	**Credit risk has increased significantly since initial recognition, but asset is not credit impaired (stage 2)**	**Asset has become credit impaired since initial recognition (stage 3)**	**Purchased or originated credit impaired**
12-month expected credit losses are recognised.	Lifetime expected credit losses (LECL) recognised.	LECL recognised.	Movement in LECL since initial recognition.

IMPAIRMENT CLASSIFICATION

DESCRIPTION	
Determination of whether the credit risk of financial instruments has increased significantly since initial recognition	In order to determine whether an advance has experienced a significant increase in credit risk, the PD of the asset calculated at the origination date is compared to that calculated at the reporting date. The origination date is defined as the most recent date at which the group has repriced an advance/facility. A change in terms results in derecognition of the original advance/facility and recognition of a new advance/facility. Significant increase in credit risk test thresholds are reassessed and, if necessary, updated, on at least an annual basis. Any facility that is more than 30 days past due, or in the case of instalment-based products one instalment past due, is automatically considered to have experienced a significant increase in credit risk. In addition to the quantitative assessment based on PDs, qualitative considerations are applied when determining whether individual exposures have experienced a significant increase in credit risk. One such qualitative consideration is the appearance of wholesale and commercial SME facilities on a credit watch list. Any up-to-date facility that has undergone a distressed restructure (i.e. a modification of contractual cash flows to prevent a client from going into arrears) will be considered to have experienced a significant increase in credit risk and will be disclosed within stage 2 at a minimum. The credit risk on an exposure is no longer considered to be significantly higher than at origination if no qualitative indicators of a significant increase in credit risk are triggered, and if comparison of the reporting date PD to the origination date PD no longer indicates that a significant increase in credit risk has occurred. No minimum period for transition from stage 2 back to stage 1 is applied, with the exception of cured distressed restructured exposures that are required to remain in stage 2 for a minimum period of six months before re-entering stage 1, as per the requirements of SARB *Directive 7 of 2015.*
Credit-impaired financial assets	Advances are considered credit impaired if they meet the definition of default. The group's definition of default applied for calculating provisions under IFRS 9 has been aligned to the definition applied for regulatory capital calculations across all portfolios, as well as those applied in operational management of credit and for internal risk management purposes. Exposures are considered to be in default when they are more than 90 days past due or, in the case of amortising products, have more than three unpaid instalments. In addition, an exposure is considered to have defaulted when there are qualitative indicators that the borrower is unlikely to pay their credit obligations in full without any recourse by the group to actions such as the realisation of security. Indicators of unlikeliness to pay are determined based on the requirements of Regulation 67 of the Banks Act. Examples include application for bankruptcy or obligor insolvency. Any distressed restructures of accounts which have experienced a significant increase in credit risk since initial recognition are defined as default events. Retail accounts are considered to no longer be in default if they meet the stringent cure definition, which has been determined at portfolio level based on analysis of re-defaulted rates. Curing from default within wholesale is determined judgmentally through a committee process.
Purchased or originated credit impaired	Financial assets that meet the above-mentioned definition of credit-impaired at initial recognition.

IMPAIRMENT ASSESSMENT

IMPAIRMENT CLASSIFICATION	DESCRIPTION
Significant increase in credit risk since initial recognition	Quantitative and qualitative factors are considered when determining whether there has been a significant increase in credit risk. **Quantitative test:** The PDs used to perform the test for a significant increase in credit risk are calculated by applying the PD model in force as at the reporting date. This model is retro-applied using data as at the origination date to determine origination date PDs. **Qualitative test:** Furthermore, a qualitative assessment is performed in order to assess if additional exposures should be migrated from stage 1 to stage 2. This assessment would consider, at a minimum, forward-looking information not taken into account in the quantitative assessment. Origination date PDs are measured at initial recognition of an instrument, unless there has been a subsequent risk-based repricing or a change in terms has taken place, which requires the derecognition of the initial advance and recognition of a new advance. Where the models used to determine PDs cannot discriminate good credit risks from bad credit risks effectively at initial recognition due to a lack of behavioural information, proxy origination dates of up to six months post initial recognition are applied. Where proxy origination dates are applied, early qualitative indicators of significant increase in credit risk, such as fraudulent account activity or partial arrears, are applied to trigger movement into stage 2. Reporting date PDs are calculated on a forward-looking basis, with PDs adjusted where appropriate to incorporate the impacts of multiple forward-looking macroeconomic scenarios.
Credit-impaired financial assets	Exposures are classified as stage 3 if there are qualitative indicators that the obligor is unlikely to pay his/her/its credit obligations in full without any recourse by the group to action such as the realisation of security. Distressed restructures of accounts in stage 2 are also considered to be default events. For a retail account to cure from stage 3 to either stage 2 or stage 1, the account needs to meet a stringent cure definition. Cure definitions are determined on a portfolio level with reference to suitable analysis and are set such that the probability of a previously cured account re-defaulting is equivalent to the probability of default for an account that has not defaulted in the past. In most retail portfolios curing is set at 12 consecutive payments. For wholesale exposures, cures are assessed on a case-by-case basis, subsequent to an analysis by the relevant debt restructuring credit committee. A default event is a separate default event only if an account has met the portfolio-specific cure definition prior to the second or subsequent default. Default events that are not separate are treated as a single default event when developing LGD models and the associated term structures.

PD, EAD and LGD estimates that are derived from regulatory capital models are used in models to determine stage 1 estimates. The outputs from the regulatory capital models are used as inputs into term structure models used for stage 2 and 3 ECL calculations.

For credit risk measurement requirements FirstRand employs the AIRB approach for FRB SA and the standardised approach for the remaining group entities. The following table *CR1: Credit quality of assets,* provides a breakdown of defaulted exposures, non-defaulted exposures and impairment allowances split between the standardised approach specific and general accounting provisions and AIRB accounting provisions. Under the IFRS 9 ECL model these provisions represent the following:

REGULATORY CLASSIFICATION	ECL IMPAIRMENT CLASSIFICATION (IFRS 9)
Standardised and AIRB approaches	
General provision	Stage 1 and 2 impairments – performing book
Specific provision	Stage 3 impairments – non-performing book

Use of an expected loss model results in earlier recognition of impairments, which generally leads to an increase in provisions held on the performing book. The approach applied under IFRS 9 for the calculation of specific provisions does not result in significant changes in coverage held for defaulted accounts.

The following tables provide the credit quality of advances in the in-force portfolio.

CR1: CREDIT QUALITY OF ASSETS*

	As at 30 June 2019						
	Gross carrying values of			Of which ECL accounting provisions for credit losses on standardised approach exposures		Of which ECL accounting provisions for credit losses on AIRB exposures	
R million	Defaulted exposures**	Non-defaulted exposures#	Allowances/ impairments	Allocated in regulatory category of specific	Allocated in regulatory category of general		Net value
1. **Gross advances**	**41 349**	**1 198 565**	**34 162**	**3 613**	**5 752**	**24 797**	**1 205 752**
FNB	**27 253**	**435 534**	**22 265**	**2 933**	**2 476**	**16 856**	**440 522**
– Retail	**18 735**	**283 821**	**14 731**	**719**	**606**	**13 406**	**287 825**
– Commercial	**4 556**	**100 575**	**3 812**	**192**	**170**	**3 450**	**101 319**
– Rest of Africa	**3 962**	**51 138**	**3 722**	**2 022**	**1 700**	**–**	**51 378**
WesBank	**7 667**	**126 420**	**4 694**	**3**	**10**	**4 681**	**129 393**
RMB investment banking	**2 544**	**289 299**	**3 285**	**–**	**945**	**2 340**	**288 558**
RMB corporate banking	**343**	**61 101**	**877**	**–**	**217**	**660**	**60 567**
Aldermore	**2 322**	**189 168**	**968**	**436**	**532**	**–**	**190 522**
FCC (including Group Treasury)	**1 220**	**97 043**	**2 073**	**241**	**1 572**	**260**	**96 190**
2. **Debt investment securities†**	**–**	**215 903**	**126**	**–**	**–**	**126**	**215 777**
3. **Off-balance sheet exposures**	**546**	**187 971**	**–**	**–**	**–**	**–**	**188 517**
4. **Total (IFRS 9)**	**41 895**	**1 602 439**	**34 288**	**3 613**	**5 752**	**24 923**	**1 610 046**

* *First-time disclosure in June 2019, comparative information for 2018 not included.*

** *Defaulted exposure is stage 3/NPLs.*

Non-defaulted exposures is the sum of stage 1 and stage 2 gross advances.

† *Excludes non-recourse investments.*

CR2: CHANGES IN STOCK OF DEFAULTED ADVANCES, DEBT SECURITIES AND OFF-BALANCE SHEET EXPOSURES

R million		Total
1.	**Defaulted credit exposures at 1 July 2018**	**33 552**
2.	Advances defaulted	**19 530**
3.	Return to non-defaulted status	**(1 402)**
4.	Amounts written off	**(8 602)**
5.	Other changes	**(1 183)**
6.	**Defaulted credit exposures at 30 June 2019**	**41 895**

Age analysis of credit exposures

A past due analysis is performed for advances with specific expiry or instalment repayment dates. The analysis is not applicable to overdraft products or products where no specific due date is determined. The level of risk on these types of products is assessed and reported with reference to the counterparty ratings of the exposures.

The following tables provide the age analysis of the group's loans and advances, debt securities and off-balance sheet items. In the tables defaulted exposures represent stage 3/NPLs, non-defaulted exposures are the sum of stage 1 and stage 2 gross advances, and allowances/impairments are total balance sheet provisions.

AGE ANALYSIS OF CREDIT EXPOSURES

R million/%	As at 30 June 2019 IFRS 9 Gross carrying values of Defaulted exposures	Non-defaulted exposures	Allowances/ impairments	Net value
FNB	**27 253**	**435 534**	**22 265**	**440 522**
– Retail	**18 735**	**283 821**	**14 731**	**287 825**
– Commercial*	**4 556**	**100 575**	**3 812**	**101 319**
– Rest of Africa	**3 962**	**51 138**	**3 722**	**51 378**
WesBank	**7 667**	**126 420**	**4 694**	**129 393**
RMB investment banking	**2 544**	**289 299**	**3 285**	**288 558**
RMB corporate banking	**343**	**61 101**	**877**	**60 567**
Aldermore	**2 322**	**189 168**	**968**	**190 522**
FCC (including Group Treasury)	**1 220**	**97 043**	**2 073**	**96 190**
Total	**41 349**	**1 198 565**	**34 162**	**1 205 752**
Percentage of total book	**3.4**	**99.4**	**2.8**	**100.0**

* *Includes public sector.*

R million/%	As at 30 June 2018 IAS 39 Gross carrying values of Defaulted exposures	Non-defaulted exposures	Allowances/ impairments	Net value
FNB	16 056	406 784	10 102	412 738
– Retail*	10 155	265 604	6 426	269 333
– Commercial**	2 714	91 273	1 552	92 435
– Rest of Africa#	3 187	49 907	2 124	50 970
WesBank*,†	7 063	129 951	3 240	133 774
RMB investment banking‡	2 299	224 166	3 419	223 046
RMB corporate banking	206	49 601	574	49 233
Aldermore	616	163 260	459	163 417
FCC (including Group Treasury)*,†,‡	707	139 353	1 041	139 019
Total	26 947	1 113 115	18 835	1 121 227
Percentage of total book	2.4	99.3	1.7	100.0

* *WesBank loans reallocated to FNB retail and Discovery card reallocated to FCC.*

** *Includes public sector.*

\# *Adjusted for the reallocation of WesBank Africa.*

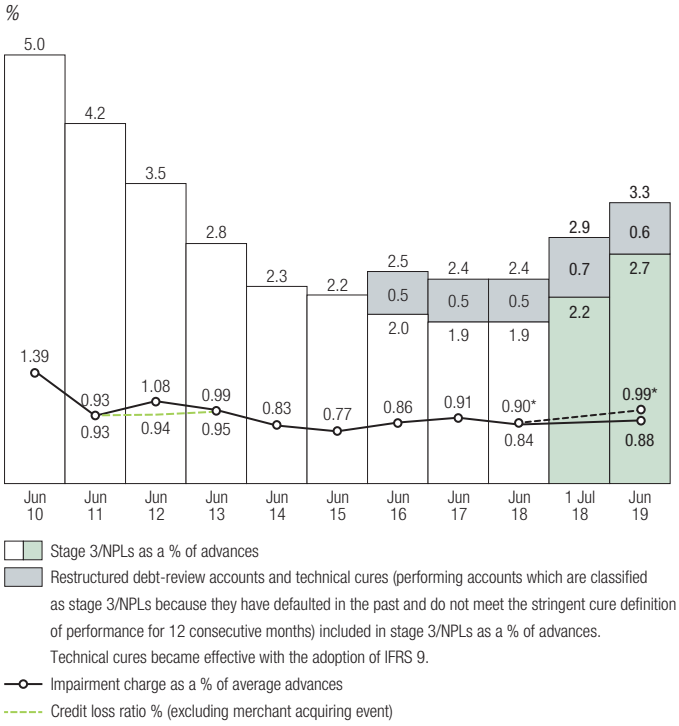
† *MotoNovo back book reallocated to FCC.*

‡ *High-quality liquid assets reallocated from FCC to RMB investment banking.*

Income statement impairment charge

Impairments are recognised through the creation of an impairment reserve and an impairment charge in the income statement. Exposures considered uncollectable are written off against the reserve for loan impairments. Subsequent recoveries against these facilities decrease the credit impairment charge in the income statement in the year of recovery. The following chart shows the history of the NPL ratio and the income statement impairment charge.

NPL AND IMPAIRMENT HISTORY*



** On a normalised basis. Impairment charge excluding Aldermore.*

Note: 30 June 2010 to 30 June 2018 figures are prepared on an IAS 39 basis. 1 July 2018 figures were restated, and therefore 1 July 2018 and 30 June 2019 figures are prepared on an IFRS 9 basis.

Refer to pages 147 to 148 of the group's *Analysis of financial results for the year ended 30 June 2019* available on the group's website at www.firstrand.co.za/investors/financial-results/ for a description of normalised performance.

Sector and geographical analysis of defaulted advances

The sector and geographical analysis of defaulted exposures are based on where the credit risk originates, i.e. the geography and sector of operation.

SECTOR DEFAULTED ADVANCES*

	As at 30 June 2019 IFRS 9			
R million	**Defaulted advances before write-offs**	**Less: write-offs excluding interest in suspense**	**Defaulted advances net of write-offs**	**Specific impairments**
Agriculture	**2 505**	**112**	**2 393**	**764**
Financial institutions	**561**	**115**	**446**	**306**
Building and property development	**2 095**	**288**	**1 807**	**904**
Government, Land Bank and public authorities	**97**	**12**	**85**	**4**
Individuals	**34 924**	**6 211**	**28 713**	**12 769**
Manufacturing and commerce	**4 654**	**782**	**3 872**	**1 754**
Mining	**847**	**291**	**556**	**98**
Transport and communication	**722**	**128**	**594**	**311**
Other services	**3 546**	**663**	**2 883**	**1 585**
Total	**49 951**	**8 602**	**41 349**	**18 495**

	As at 30 June 2018 IAS 39			
R million	Defaulted advances before write-offs	Less: write-offs excluding interest in suspense	Defaulted advances net of write-offs	Specific impairments
Agriculture	1 334	26	1 308	255
Financial institutions	511	40	471	279
Building and property development	1 608	417	1 191	546
Government, Land Bank and public authorities	329	8	321	12
Individuals	25 494	7 208	18 286	6 313
Manufacturing and commerce	3 670	414	3 256	1 562
Mining	178	8	170	116
Transport and communication	433	91	342	178
Other services	2 178	576	1 602	731
Total	35 735	8 788	26 947	9 992

* *There were no defaulted advances in the banks sector during 2018 and 2019.*

GEOGRAPHIC DEFAULTED ADVANCES*

R million	As at 30 June 2019 IFRS 9			
	Defaulted advances before write-offs	**Less: write-offs excluding interest in suspense**	**Defaulted advances net of write-offs**	**Specific impairments**
South Africa	**40 074**	**6 829**	**33 245**	**15 003**
Rest of Africa	**4 575**	**343**	**4 232**	**2 609**
UK	**4 566**	**1 161**	**3 405**	**861**
Other Europe	**102**	**102**	**–**	**–**
Australasia	**569**	**167**	**402**	**–**
Asia	**65**	**–**	**65**	**22**
Total	**49 951**	**8 602**	**41 349**	**18 495**

R million	As at 30 June 2018 IAS 39			
	Defaulted advances before write-offs	Less: write-offs excluding interest in suspense	Defaulted advances net of write-offs	Specific impairments
South Africa	30 235	8 115	22 120	7 821
Rest of Africa	3 455	25	3 430	1 607
UK	1 841	648	1 193	480
Other Europe	75	–	75	75
Australasia	128	–	128	9
Asia	1	–	1	–
Total	35 735	8 788	26 947	9 992

** There were no exposures in North America or South America during 2018 and 2019.*

SECTOR AND GEOGRAPHIC DEFAULTED DEBT INVESTMENT SECURITIES AND OFF-BALANCE SHEET EXPOSURES*

	As at 30 June	
	2019 IFRS 9	2018 IAS 39
R million	**Defaulted advances before write-offs**	Defaulted advances before write-offs
Off-balance sheet items**		
Sector	**546**	38
– Agriculture	**14**	–
– Financial institutions	**9**	–
– Building and property development	**65**	–
– Government, Land Bank and public authorities	**21**	22
– Individuals	**265**	–
– Manufacturing and commerce	**109**	16
– Mining	**20**	–
– Transport and communication	**2**	–
– Other services	**41**	–
Geography – South Africa	**546**	38

** There were no defaulted debt investment securities or write-offs during 2018 and 2019.*

*** Off-balance sheet provision for impairment under IAS 39 differs from the prescribed method to determine ECL for off-balance sheet exposure under IFRS 9 in the year under review.*

Restructured exposures

A restructure is defined as any formal agreement between the customer and the group to amend contractual amounts due (or the timing thereof). This can be initiated by the customer, the group or a third party e.g. debt management company. A restructure is defined as a distressed restructure where it is entered into:

- from a position of arrears;
- where an account was in arrears at any point during the past six months; or
- from an up-to-date position, in order to prevent the customer from going into arrears.

Distressed restructuring is regarded as objective evidence of impairment. Classification of distressed restructures adheres to the relevant regulatory requirements. Restructured exposures shown below are applicable to South African operations. Retail restructured exposures include loans under debt review of R4.6 billion. Restructured exposures are classified as impaired once the group determines it is probable that it will be unable to collect all principal and interest due according to the new terms and conditions of the restructured agreement. Unimpaired restructures include those that are considered performing and not distressed.

RESTRUCTURED EXPOSURES SPLIT BETWEEN IMPAIRED AND NOT IMPAIRED

	As at 30 June 2019 IFRS 9		
R million	**Impaired**	**Not impaired**	**Total**
Advances	**4 562**	**6 549**	**11 111**
Off-balance sheet exposures	**5**	**195**	**200**
Total	**4 567**	**6 744**	**11 311**

	As at 30 June 2018 IAS 39		
R million	Impaired	Not impaired	Total
Advances	5 695	5 277	10 972
Off-balance sheet exposures	–	–	–
Total	5 695	5 277	10 972

Monitoring of weak exposures

Credit exposures are actively monitored throughout the life of transactions. Portfolios are formally reviewed by portfolio committees either monthly or quarterly to assess levels of individual counterparty risk, portfolio risks and to act on any early warning indicators. The performance and financial condition of borrowers are monitored based on information from internal sources, credit bureaux, borrowers and publicly available information. The frequency of monitoring and contact with the borrower is determined from the borrower's risk profile. Reports on the overall quality of the portfolio are monitored at business unit level, portfolio level and in aggregate for the group.

Management of concentration risk

Credit concentration risk is the risk of loss to the group arising from an excessive concentration of exposure to a single counterparty, industry, market, product, financial instrument or type of security, country or region, or maturity. This concentration typically exists when a number of counterparties are engaged in similar activities and have similar characteristics that would cause their ability to meet contractual obligations to be similarly affected by changes in economic or other conditions.

Concentration risk is managed based on the nature of the credit concentration within each portfolio. The group's credit portfolio is well diversified, achieved through setting maximum exposure guidelines to individual counterparties. The group constantly reviews its concentration levels and sets maximum exposure guidelines for these. Excesses are reported to the RCC committee.

Geographic, industry and residual maturity concentration risk

Geographically, most of the group's exposures are in South Africa. The following tables provide the geographical, industry and residual maturity split of gross advances after deduction of interest in suspense, and debt investment securities (excluding non-recourse investments and off-balance sheet exposures).

BREAKDOWN OF EXPOSURES ACROSS GEOGRAPHICAL AREAS

	As at 30 June			
	2019 IFRS 9		2018 IAS 39	
R million	**Gross advances and debt investment securities***	**Significant off-balance sheet exposures**	Gross advances and debt investment securities*	Significant off-balance sheet exposures
South Africa	**1 007 864**	**142 837**	916 863	137 664
Rest of Africa	**128 293**	**16 110**	115 606	20 596
United Kingdom	**269 562**	**19 019**	245 988	13 615
Other Europe	**25 551**	**3 785**	21 442	1 384
North America	**7 734**	**885**	12 244	1 143
South America	**178**	**–**	260	24
Australasia	**528**	**93**	631	128
Asia	**16 107**	**5 788**	8 954	3 342
Total	**1 455 817**	**188 517**	1 321 988	177 896

* *Debt investment securities exclude non-recourse investments.*

BREAKDOWN OF EXPOSURES ACROSS INDUSTRIES

	As at 30 June			
	2019 IFRS 9		2018 IAS 39	
R million	**Gross advances and debt investment securities***	**Significant off-balance sheet exposures**	Gross advances and debt investment securities*	Significant off-balance sheet exposures
Agriculture	**43 718**	**2 286**	37 323	3 010
Banks and financial services	**238 009**	**25 770**	186 584	32 665
Building and property development	**67 376**	**5 164**	63 898	5 846
Government, Land Bank and public authorities	**189 761**	**2 384**	178 040	5 599
Individuals	**605 685**	**67 556**	564 685	57 732
Manufacturing and commerce	**137 333**	**39 915**	128 018	21 012
Mining	**12 354**	**18 626**	13 077	24 905
Transport and communication	**31 844**	**10 449**	26 406	9 570
Other services	**129 737**	**16 367**	123 958	17 557
Total	**1 455 817**	**188 517**	1 321 989	177 896

* *Debt investment securities exclude non-recourse investments.*

BREAKDOWN OF EXPOSURES BY RESIDUAL MATURITY

	As at 30 June			
	2019 IFRS 9		2018 IAS 39	
R million	**Gross advances and debt investment securities***	**Significant off-balance sheet exposures**	Gross advances and debt investment securities*	Significant off-balance sheet exposures
Less than one year (including call)	**473 155**	**183 194**	427 964	174 272
Between 1 and 5 years	**493 641**	**4 094**	446 376	2 060
Over 5 years	**446 452**	**1 229**	418 575	1 564
Non-contractual amounts	**42 569**	**–**	29 074	–
Total	**1 455 817**	**188 517**	1 321 989	177 896

* *Debt investment securities exclude non-recourse investments.*

CREDIT RISK MITIGATION

The group's credit risk mitigation approach is described on page 22.

Furthermore, it is the group's policy that all items of collateral are valued at the inception of a transaction and at various points throughout the life of a transaction, either through physical inspection or indexation methods, as appropriate. For corporate and commercial portfolios, the value of collateral is reviewed as part of the annual facility review. For mortgage portfolios, collateral valuations are updated on an ongoing basis through statistical indexation models. In the event of default, however, more detailed reviews and valuations of collateral are performed, which yield a more accurate financial impact.

Limited on- and off-balance sheet netting is used in the process of determining exposure to credit risk. RMB and FNB apply netting for corporate, SME corporate, banks, securities firms, public sector and sovereign exposures based on facility type, natural set-off, net exposure determination rules and ceding rules. The policies followed are documented and strictly governed by the applicable regulatory clauses.

CR3: CREDIT RISK MITIGATION TECHNIQUES

	As at 30 June 2019 IFRS 9				
	Exposures*				
	Unsecured	**Secured by collateral**		**Secured by financial guarantees**	
R million	**carrying value**	**Carrying value**	**Secured amount**	**Carrying value**	**Secured amount**
Advances	**189 720**	**1 016 032**	**1 016 032**	**13 376**	**13 376**
Debt securities	**53 593**	**162 184**	**162 184**	**–**	**–**
Total advances and debt securities	**243 313**	**1 178 216**	**1 178 216**	**13 376**	**13 376**
Of which defaulted	**3 398**	**19 456**	**19 456**	**–**	**–**

** No exposures were secured by credit derivatives during the year under review.*

	As at 30 June 2018 IAS 39				
	Exposures*				
	Unsecured	Secured by collateral		Secured by financial guarantees	
R million	carrying value	Carrying value	Secured amount	Carrying value	Secured amount
Advances	181 942	939 781	939 781	5 300	5 300
Debt securities	65 001	116 926	116 926	–	–
Total advances and debt securities	246 943	1 056 707	1 056 707	5 300	5 300
Of which defaulted	5 046	11 909	11 909	–	–

** No exposures were secured by credit derivatives during the year.*

CREDIT RISK UNDER AIRB APPROACH

The use of quantitative models is crucial to the successful management of credit risk, with models being applied across the credit value chain to drive business decisions and to measure and report on credit risk.

Technical requirements for the development of credit risk models are captured in model-type specific model development frameworks, while model governance, validation and implementation requirements are articulated in the group's model risk management framework for credit risk. Where applicable, independent validation of credit risk models is performed according to requirements articulated in model-type specific independent validation frameworks.

Credit risk models are widely employed in the assessment of capital requirements, origination, pricing, impairment calculations and stress testing of the credit portfolio. All of these models are built on a number of client and facility rating models, in line with the AIRB approach requirements and the group's model building frameworks. Credit risk approaches employed across the group are shown in the following table.

Basel approach	FRB SA	Remaining group entities
AIRB	✓	
Standardised approach	✓	✓

The following table provides the EAD composition by major portfolio within the group (including Aldermore), for each of the credit approaches.

EAD % per portfolio	AIRB	Standardised approach
Retail	**67**	**33**
Commercial	**62**	**38**
Corporate	**78**	**22**

Even though the remaining subsidiaries do not have regulatory approval to use the AIRB approach, the same or similar models are applied for the internal assessment of credit risk on the standardised approach. The models are used for the internal assessment of the three primary credit risk components:

- probability of default (PD);
- exposure at default (EAD); and
- loss given default (LGD).

Management of the credit portfolio is reliant on these three credit risk measures. PD, EAD and LGD are inputs into the portfolio and group-level credit risk assessment where the measures are combined with estimates of correlations between individual counterparties, industries and portfolios to reflect diversification benefits across the portfolio.

PROBABILITY OF DEFAULT	
Definition	→ The probability of a counterparty defaulting on any of its obligations over the next 12 months. → A measure of the counterparty's ability and willingness to repay facilities granted.
Dimensions	→ Time-driven: counterparty is in arrears for more than 90 days or three instalments. → Event-driven: there is reason to believe that the exposure will not be recovered in full and has been classified as such.
Application	→ All credit portfolios. → Recognition of NPLs for accounting.
PD measures	→ Through-the-cycle PD measures reflect long-term, average default expectations over the course of the economic cycle. Through-the-cycle PDs are inputs in economic and regulatory capital calculations. → Point-in-time PD measures reflect default expectations in the current economic environment and thus tend to be more volatile than through-the-cycle PDs. Point-in-time PDs are used in credit portfolio management, including risk appetite and portfolio monitoring.
Measure application	→ Probability of default is used in the management of exposure to credit risk.

The group employs a granular, 100-point master rating scale which has been mapped to the continuum of default probabilities, as illustrated in the following table. These mappings are reviewed and updated on a regular basis. The group currently only uses mapping to S&P Global Ratings (S&P) rating scales.

MAPPING OF FIRSTRAND (FR) GRADES TO RATING AGENCY SCALES

FR RATING	MIDPOINT PD	INTERNATIONAL SCALE MAPPING
1 – 14	0.06%	AAA, AA+, AA, AA-, A+, A, A-
15 – 25	0.29%	BBB+, BBB(upper), BBB, BBB-(upper), BBB-, BB+(upper)
26 – 32	0.77%	BB+, BB(upper), BB, BB-(upper)
33 – 39	1.44%	BB-, B+(upper)
40 – 53	2.52%	B+
54 – 83	6.18%	B(upper), B, B-(upper)
84 – 90	13.68%	B-
91 – 99	59.11%	CCC
100	100%	D (defaulted)

- FR1 is the lowest PD and FR100 the highest.
- External ratings have also been mapped to the master rating scale for reporting purposes.

EXPOSURE AT DEFAULT

Definition	The expected exposure to a counterparty through a facility should the counterparty default over the next 12 months. It reflects commitments made and facilities granted that have not been paid out and may be drawn over the period under consideration (i.e. off-balance sheet exposures). It is also a measure of potential future exposure on derivative positions.
Application	A number of EAD models, which are tailored to the respective portfolios and products employed, are in use across the group. These have been developed internally and are calibrated to historical default experience.

LOSS GIVEN DEFAULT

Definition	The economic loss on a particular facility upon default of the counterparty is expressed as a percentage of exposure outstanding at the time of default.
Dependent on	→ Type, quality and level of subordination. → Value of collateral held compared to the size of overall exposure. → Effectiveness of the recovery process and timing of cash flows received during the work-out or restructuring process.
Application	→ All credit portfolios. → Recognition of NPLs for accounting.
Distinctions	→ Long-run expected LGDs (long-run LGDs). → LGDs reflective of downturn conditions: – more conservative assessment of risk, incorporating a degree of interdependence between PD and LGD that can be found in a number of portfolios, i.e. instances where deteriorating collateral values are also indicative of higher default risk; and – used in the calculation of regulatory capital estimates.

Expected loss (EL)

EL, the product of the primary risk measures PD, EAD and LGD, is a forward-looking measure of portfolio or transaction risk. It is used for a variety of purposes along with other risk measures. EL is not directly comparable to impairment levels, as EL calculations are based on regulatory parameters, through-the-cycle PD and downturn LGD, whilst impairment calculations are driven by IFRS requirements.

Credit risk model development and approval

Requirements for the model development and validation process, including governance requirements, implementation requirements and associated roles and responsibilities, are articulated in the group's model risk management framework for credit risk and apply to all credit risk models used across the group.

Roles and responsibilities related to the model risk management process, as well as model governance and validation requirements, are defined in this framework with reference to the stages of the credit risk model life cycle. Governance and validation requirements for new model developments also apply to significant model changes, which are defined as changes to the structure of a model or model rating factors.

The following roles are defined to ensure that model risk is adequately managed across the credit value chain and throughout the credit risk model life cycle.

- **Model owner –** responsible for the overall performance of the model, including ensuring that the model is implemented correctly and used appropriately. The model owner should be the head of credit for the portfolio within which the model will be applied, unless model ownership has been delegated to an appropriate central function.
- **Model developer –** responsible for the development of the model, using appropriate methodologies that align with the intended model use and for producing appropriate model documentation. The model developer should be a senior analyst in the business unit in which the model will be used, unless model development has been outsourced to an appropriate central function.
- **Model validator –** sets the framework against which the model will be validated and performs the independent validation of the model in accordance with the relevant approved model validation framework. The model validator should be in ERM, unless independent validation has been delegated to another function or area that is independent from the model owner and model developer.
- **Model approver –** responsible for the final approval of the model for its intended use. Model approval is the responsibility of the RCC committee or its designated subcommittee, and the final model approver is dependent on model type and model risk classification.
- **GIA –** responsible for monitoring adherence to the requirements of the model risk management framework for credit risk and other related policies and frameworks.

The model governance and validation process for each stage of the credit risk model life cycle is described in the following table. This is applicable to new model developments and significant model changes.

MODEL GOVERNANCE AND VALIDATION IN THE CREDIT MODEL LIFE CYCLE

LIFE CYCLE STAGE	DESCRIPTION	MODEL GOVERNANCE AND VALIDATION
Model development	New models, updates and calibrations.	Model and documentation sign-off by model owner. Approval by retail/wholesale technical committee.
Independent validation	Independent review of model, underlying methodology and results.	In line with requirements of regulatory capital model validation frameworks.
Model approval	Final approval indicating model may be implemented and used as intended.	Approval by: → Model risk and validation committee (MRVC); → RCC committee (for material models); and → PA (if required by PA communication policy).
Model implementation	Into production environment.	Model owner sign-off.
Post-implementation review	Confirmation of successful model implementation.	Model owner sign-off. Noted at MRVC. Material models noted at RCC committee.
Ongoing monitoring and validation	Confirmation of continued model relevance and accuracy.	Model owner and technical committee sign off results. Annual independent validation noted at: → MRVC; → RCC committee (material models); and → PA (if required by PA communication policy).

AIRB models

AIRB models are developed in alignment with regulatory requirements for measurement of credit risk regulatory capital. Models used within retail portfolios are developed using methodologies described in the retail AIRB model development and validation framework. Corporate models are developed using statistical, expert judgement and, hybrid and simulation approaches, with the approach selected according to the characteristics of the exposures modelled.

Parameter floors are applied to the models outputs as follows, in accordance with regulatory requirements:

- PDs – 0.3%;
- Residential mortgage LGDs – 10%; and
- EADs – 100% of drawn exposure.

The time lapse between the default event and closure of the exposure depends on the type of collateral (if any) assigned to the underlying exposure. Within secured portfolios, write-off takes place once collateral perfection has occurred, or once it has been subjectively established that asset recovery will not be possible. Within unsecured portfolios, write-off occurs once an exposure has been in default for a specified period of time or has missed a specified number of payments, as articulated in product-level write-off policies.

The table below gives an overview of the key AIRB models used for regulatory capital calculation within each portfolio, including a breakdown of the individual models applied and a description of the modelling methodologies.

PORTFOLIO	NUMBER OF MODELS	MODEL TYPE	MODEL DESCRIPTION
Large corporate portfolios (RMB and WesBank) Private sector counterparties, including corporates and securities firms, and public sector counterparties. Products include loan facilities, structured finance facilities, contingent products and derivative instruments.	14	**PD**	→ Internally developed statistical rating models using internal and external data covering full economic cycles are used and results supplemented with qualitative assessments based on international rating agency methodologies. → All ratings (and associated PDs) are reviewed by the wholesale credit committee and, if necessary, final adjustments made to ratings to reflect information not captured by the models.
		LGD	→ LGD estimates are based on modelling a combination of internal and suitably adjusted international data with the wholesale credit committee responsible for reviewing and approving LGDs. The LGD models consider the type of collateral underlying the exposure.
		EAD	→ EAD estimates are based on suitably adjusted international data. The credit conversion factor approach is typically used to inform the EAD estimation process. The same committee process responsible for reviewing and approving PDs is applied to the review and approval of EADs.
Low default portfolios: sovereign and bank exposures South African and non-South African banks, local and foreign currency sovereign and sub-sovereign exposures.	10	**PD**	→ PDs are based on internally developed statistical and expert judgement models, which are used in conjunction with external rating agency ratings and structured peer group analysis to determine final ratings. PD models are calibrated using external default data and credit spread market data. → All ratings (and associated PDs) are reviewed by the wholesale credit committee and, if necessary, final adjustments made to ratings to reflect information not captured by the models.
		LGD	→ LGD estimates are based on modelling a combination of internal and suitably adjusted international data which is reviewed by the same committee process responsible for reviewing and approving PDs. The LGD models consider the type of collateral underlying the exposure.
		EAD	→ Estimation is based on regulatory guidelines with credit conversion factors used as appropriate. External data and expert judgement are used due to the low default nature of the exposures.
Specialised lending portfolios (RMB, FNB commercial) Exposures to private sector counterparties for the financing of project finance, high volatility commercial real estate, and income-producing real estate.	4	**PD**	→ The rating systems are based on hybrid models using a combination of statistical cash flow simulation models and qualitative scorecards calibrated to a combination of internal data and external benchmarks. → All ratings (and associated PDs) are reviewed by the wholesale credit committee and, if necessary, final adjustments made to ratings to reflect information not captured by the models.
		LGD	→ The LGD estimation process is similar to that followed for PD with simulation and expert judgement used as appropriate.
		EAD	→ EAD estimates are based on internal as well as suitably adjusted external data. The credit conversion factor approach is typically used to inform the EAD estimation process.

PORTFOLIO	NUMBER OF MODELS	MODEL TYPE	MODEL DESCRIPTION
Commercial portfolios (FNB commercial) Exposures to SME corporate and retail clients. Products include loan facilities, contingent products and term lending products.	12	**PD**	→ **SME corporate –** counterparties are scored using financial statement information in addition to other internal risk drivers, the output of which is calibrated to internal historical default data. → **SME retail –** the SME retail portfolio is segmented into homogeneous pools and subpools through an automated scoring process using statistical models that incorporate product type, customer behaviour and delinquency status. PDs are estimated for each subpool based on internal product level history associated with the respective homogeneous pools and subpools.
		LGD	→ **SME corporate –** recovery rates are largely determined by collateral type and these have been set with reference to internal historical loss data, external data and Basel guidelines. → **SME retail –** LGD estimates are applied on a portfolio level, estimated from internal historical default and recovery experience.
		EAD	→ **SME corporate –** portfolio-level credit conversion factors are estimated on the basis of the group's internal historical experience and benchmarked against international studies. → **SME retail –** EAD estimates are applied on a portfolio level, estimated from internal historical default and recovery experience.
Residential mortgages (FNB retail) Exposures to individuals for financing of residential properties.	15	**PD**	→ Portfolios/products are segmented into homogeneous pools and subpools through an automated scoring process using statistical models that incorporate product type, loan characteristics, customer behaviour, application data and delinquency status. → PDs are estimated for each subpool based on internal product level history associated with the respective homogeneous pools and subpools.
		LGD	→ LGD estimates are based on subsegmentation with reference to collateral or product type, time in default and post-default payment behaviour. Final estimates are based on associated analyses and modelling of historical internal loss data.
		EAD	→ EAD estimates are based on subsegmentation with reference to product-level analyses and modelling of historical internal exposure data.

PORTFOLIO	NUMBER OF MODELS	MODEL TYPE	MODEL DESCRIPTION
Qualifying revolving retail exposures (FNB retail) Exposures to individuals providing a revolving limit through credit card or overdraft facility.	9	**PD**	→ Portfolios/products are segmented into homogeneous pools and subpools through an automated scoring process using statistical models that incorporate product type, loan characteristics, customer behaviour, application data and delinquency status. → PDs are estimated for each subpool based on internal product level history associated with the respective homogeneous pools and subpools.
		LGD	→ LGD estimates are based on subsegmentation with reference to product type. Final estimates are based on associated analyses and modelling of historical internal loss data.
		EAD	→ EAD measurement plays a significant role in the assessment of risk due to the typically high level of undrawn facilities characteristic of these product types. EAD estimates are based on actual historic EAD, segmented appropriately, e.g. straight vs budget in the case of credit cards.
Other exposures (FNB personal loans, WesBank loans and VAF)	15	**PD**	→ Portfolios/products are segmented into homogeneous pools and subpools through an automated scoring process using statistical models that incorporate product type, loan characteristics, customer behaviour, application data and delinquency status. → PDs are estimated for each subpool based on internal product-level history associated with the respective homogeneous pools and subpools.
		LGD	→ LGD estimates are based on subsegmentation with reference to collateral (in the case of WesBank VAF) or product type and time in default. Final estimates are based on associated analyses and modelling of historical internal loss data.
		EAD	→ EAD estimates are based on subsegmentation with reference to product-level analyses and modelling of historical internal exposure data.

Use of credit risk measures

Credit risk management encompasses the following:

- credit approval;
- pricing;
- limit-setting/risk appetite;
- reporting;
- provisioning;
- capital calculations and allocation;
- profitability analysis;
- stress testing;
- risk management and credit monitoring; and
- performance measurement.

The following table describes the use of credit risk actions and measures across a number of key areas and business processes related to the management of the credit portfolio.

USE OF CREDIT RISK MANAGEMENT ACTIONS AND MEASURES IN THE CREDIT LIFE CYCLE

	CORPORATE	RETAIL
Determination of portfolio and client acquisition strategy	→ Assessment of overall portfolio credit risk determined by PD, EAD and LGD. → Acquisition and overall strategy set in terms of appropriate limits and group risk appetite.	→ Same measures as for corporate. → Credit models determine loss thresholds used in setting of credit risk appetite.
Determination of individual and portfolio limits	→ Industry and geographical concentrations. → Ratings. → Risk-related limits on the composition of portfolio. → Group credit risk appetite.	→ Same measures as for corporate. → Modelled versus actual experience is evaluated in setting of risk appetite.
Profitability analysis and pricing decisions	→ PD, EAD and LGD used to determine pricing. → Economic profit used for profitability.	→ Same measures as for corporate.
Credit approval	→ Consideration of application's ratings. → Credit risk appetite limits. → Projected risk-adjusted return on economic capital (PD, EAD and LGD are key inputs in these measures).	→ Automated based on application scorecards (scorecards are reflective of PD, EAD and LGD). → Assessment of client's affordability.
Credit monitoring and risk management	→ Risk assessment based on PD, EAD and LGD. → Counterparty FR grades updated based on risk assessment. → Additional capital for large transactions that will increase concentration risk.	→ Same measures as for corporate. → Monthly analysis of portfolio and risk movements used in portfolio management and credit strategy decisions.
Impairments	→ Macroeconomic models, PD, EAD and LGD used for stage 1, stage 2 and stage 3 ECL. → Judgemental assessment to determine adequacy of impairments.	→ Macroeconomic models, PD, EAD and LGD used for stage 1, stage 2 and stage 3 ECL.
Regulatory and economic capital calculation	→ Primary credit risk measures, PD, EAD and LGD are the most important inputs.	→ Primary credit risk measures, PD, EAD and LGD are the most important inputs.
Reporting to senior management and board	→ Portfolio reports discussed at business and business unit risk committee meetings. → Quarterly portfolio reports submitted to credit risk management and RCC committees.	→ Portfolio reports discussed at business and business unit risk committee meetings. → Quarterly portfolio reports submitted to credit risk management and RCC committees.

Credit risk exposures by portfolio and PD range

The following tables provide the main parameters used for the calculation of capital requirements for the exposures in the AIRB models split by asset class and shown within fixed regulatory PD ranges. These exposures are for **FRB SA**, where AIRB models are applied. The information in the different columns is explained as follows:

- regulatory supplied credit conversion factors (CCF) are used;
- CRM measures applied are described on page 22;
- number of obligors corresponds to the number of counterparties in the PD band;
- average PD and LGD are weighted by EAD;
- average maturity is the obligor maturity in years weighted by EAD;
- RWA density is the total RWA to EAD post-CRM; and
- provisions are only included on a total basis.

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE

	Total FRB SA					
	As at 30 June 2019					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	**38 213**	**19 864**	**36.14**	**39 511**	**0.07**	**130 579**
0.15 to <0.25	**46 272**	**37 225**	**55.14**	**55 718**	**0.17**	**89 490**
0.25 to <0.50	**324 088**	**73 996**	**48.57**	**315 957**	**0.39**	**261 834**
0.50 to <0.75	**86 525**	**21 756**	**51.65**	**95 289**	**0.66**	**488 821**
0.75 to <2.50	**297 707**	**74 321**	**51.29**	**317 264**	**1.58**	**2 430 894**
2.50 to <10.00	**154 493**	**29 001**	**28.65**	**165 794**	**4.69**	**3 036 294**
10.00 to <100.00	**38 233**	**3 322**	**41.72**	**39 728**	**24.95**	**1 169 845**
100.00 (default)	**33 548**	**–**	**–**	**33 390**	**100.00**	**1 635 769**
Total	**1 019 079**	**259 485**	**47.28**	**1 062 651**	**5.47**	**9 243 526**

	Total FRB SA					
	As at 30 June 2019					
PD scale	Average LGD %	Average maturity years	RWA R million*	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	**26.07**	**0.65**	**2 987**	**7.56**	**9**	
0.15 to <0.25	**31.21**	**1.35**	**12 456**	**22.35**	**29**	
0.25 to <0.50	**18.51**	**2.02**	**70 600**	**22.34**	**222**	
0.50 to <0.75	**26.01**	**0.87**	**28 714**	**30.13**	**159**	
0.75 to <2.50	**27.92**	**0.83**	**142 189**	**44.82**	**1 248**	
2.50 to <10.00	**38.58**	**0.46**	**116 085**	**70.02**	**2 368**	
10.00 to <100.00	**39.14**	**0.68**	**46 223**	**116.35**	**2 910**	
100.00 (default)	**46.48**	**0.43**	**19 739**	**59.12**	**11 359**	
Total	**27.72**	**1.13**	**438 993**	**41.31**	**18 304**	**24 579**

* *The difference between the OV1: Overview of RWA and CR6 templates RWA is due to slotting.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Total FRB SA					
	As at 30 June 2018					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	50 646	30 292	46.15	67 487	0.04	236 206
0.15 to <0.25	40 448	28 936	50.93	51 138	0.17	104 738
0.25 to <0.50	349 932	82 812	42.90	345 001	0.38	341 988
0.50 to <0.75	77 747	21 911	51.95	88 753	0.66	461 528
0.75 to <2.50	272 178	62 060	54.03	292 640	1.57	2 273 148
2.50 to <10.00	138 724	20 862	38.26	148 547	4.62	2 631 106
10.00 to <100.00	32 355	3 073	53.20	34 259	26.34	1 090 725
100.00 (default)	20 815	125	60.22	21 139	100.00	1 298 987
Total	982 845	250 071	47.53	1 048 964	4.16	8 438 426

	Total FRB SA					
	As at 30 June 2018					
PD scale	Average LGD %	Average maturity years	RWA R million*	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	30.86	0.65	2 941	4.36	10	
0.15 to <0.25	30.95	1.25	11 144	21.79	26	
0.25 to <0.50	21.73	1.96	92 728	26.88	281	
0.50 to <0.75	26.35	0.96	28 682	32.32	158	
0.75 to <2.50	27.64	1.04	129 576	44.28	1 308	
2.50 to <10.00	36.43	1.11	101 908	68.60	2 567	
10.00 to <100.00	38.86	0.87	39 707	115.90	3 594	
100.00 (default)	40.34	1.16	20 126	95.21	6 828	
Total	27.82	1.33	426 812	40.69	14 772	13 670

* *The difference between the OV1: Overview of RWA and CR6 templates RWA is due to slotting.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Corporate					
	As at 30 June 2019					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	**3 538**	**1 320**	**45.02**	**3 295**	**0.08**	**1**
0.15 to <0.25	**14 195**	**20 185**	**50.63**	**23 834**	**0.17**	**29**
0.25 to <0.50	**64 091**	**34 711**	**50.02**	**77 021**	**0.38**	**134**
0.50 to <0.75	**23 892**	**7 302**	**49.42**	**24 470**	**0.73**	**83**
0.75 to <2.50	**43 120**	**17 206**	**52.88**	**49 694**	**1.77**	**202**
2.50 to <10.00	**6 903**	**2 025**	**50.92**	**7 756**	**5.27**	**104**
10.00 to <100.00	**1 796**	**819**	**48.82**	**2 179**	**10.34**	**69**
100.00 (default)	**2 201**	**–**	**–**	**2 201**	**100.00**	**10**
Total	**159 736**	**83 568**	**50.63**	**190 450**	**2.22**	**632**

	Corporate					
	As at 30 June 2019					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	**32.50**	**1.74**	**526**	**15.96**	**1**	
0.15 to <0.25	**29.42**	**1.98**	**5 991**	**25.14**	**12**	
0.25 to <0.50	**31.29**	**1.67**	**30 732**	**39.90**	**90**	
0.50 to <0.75	**30.99**	**1.75**	**12 597**	**51.48**	**55**	
0.75 to <2.50	**32.45**	**1.98**	**38 581**	**77.64**	**288**	
2.50 to <10.00	**38.29**	**1.58**	**9 682**	**124.83**	**151**	
10.00 to <100.00	**36.38**	**1.74**	**3 499**	**160.58**	**81**	
100.00 (default)	**40.78**	**1.02**	**–**	**–**	**835**	
Total	**31.79**	**1.79**	**101 608**	**53.35**	**1 513**	**2 222**

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Corporate					
	As at 30 June 2018					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	3 204	957	56.90	3 231	0.08	7
0.15 to <0.25	14 902	16 942	54.89	23 956	0.17	28
0.25 to <0.50	98 216	41 534	49.36	114 033	0.37	156
0.50 to <0.75	19 831	8 749	55.72	23 409	0.74	95
0.75 to <2.50	38 531	10 527	56.33	43 449	1.71	198
2.50 to <10.00	5 855	2 346	51.39	6 994	4.32	90
10.00 to <100.00	2 097	629	49.48	2 400	16.21	62
100.00 (default)	488	18	47.40	496	100.00	8
Total	183 124	81 702	52.24	217 968	1.18	644

	Corporate					
	As at 30 June 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	32.99	1.44	481	14.89	1	
0.15 to <0.25	30.75	1.60	5 792	24.18	13	
0.25 to <0.50	32.81	1.87	51 122	44.83	135	
0.50 to <0.75	33.34	1.89	13 631	58.23	58	
0.75 to <2.50	34.11	1.90	34 874	80.26	255	
2.50 to <10.00	31.12	1.58	6 606	94.45	94	
10.00 to <100.00	40.54	1.63	4 600	191.67	176	
100.00 (default)	78.45	1.00	–	–	389	
Total	33.04	1.83	117 106	53.73	1 121	2 247

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Specialised lending					
	As at 30 June 2019					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	**44**	**–**	**–**	**44**	**0.06**	**–**
0.15 to <0.25	**1 039**	**68**	**–**	**1 039**	**0.17**	**2**
0.25 to <0.50	**33 056**	**7 912**	**58.01**	**35 061**	**0.35**	**32**
0.50 to <0.75	**8 191**	**759**	**57.81**	**8 470**	**0.74**	**66**
0.75 to <2.50	**21 076**	**1 288**	**40.93**	**21 652**	**1.74**	**691**
2.50 to <10.00	**3 602**	**128**	**46.21**	**3 730**	**3.62**	**397**
10.00 to <100.00	**3 620**	**26**	**61.68**	**3 656**	**16.65**	**167**
100.00 (default)	**648**	**–**	**–**	**648**	**100.00**	**28**
Total	**71 276**	**10 181**	**55.31**	**74 300**	**2.63**	**1 383**

	Specialised lending					
	As at 30 June 2019					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	**20.00**	**1.00**	**3**	**6.82**	**–**	
0.15 to <0.25	**21.56**	**4.23**	**294**	**28.30**	**–**	
0.25 to <0.50	**17.86**	**2.45**	**8 689**	**24.78**	**22**	
0.50 to <0.75	**22.94**	**2.36**	**3 651**	**43.11**	**14**	
0.75 to <2.50	**29.78**	**2.32**	**16 114**	**74.42**	**119**	
2.50 to <10.00	**24.31**	**2.93**	**3 007**	**80.62**	**33**	
10.00 to <100.00	**23.14**	**3.86**	**4 749**	**130.25**	**139**	
100.00 (default)	**55.21**	**4.98**	**–**	**–**	**358**	
Total	**22.87**	**2.54**	**36 507**	**49.14**	**685**	**507**

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Specialised lending					
	As at 30 June 2018					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	383	26	58.00	398	0.08	1
0.15 to <0.25	1 061	63	–	1 061	0.17	2
0.25 to <0.50	32 044	4 022	50.98	32 764	0.35	32
0.50 to <0.75	9 171	1 564	58.26	9 755	0.74	61
0.75 to <2.50	15 426	1 909	56.72	16 153	1.82	682
2.50 to <10.00	5 802	166	58.00	5 918	4.39	380
10.00 to <100.00	868	130	75.73	974	15.98	59
100.00 (default)	396	–	–	396	100.00	29
Total	65 151	7 880	53.99	67 419	1.92	1 246

	Specialised lending					
	As at 30 June 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	28.79	1.30	44	11.06	–	
0.15 to <0.25	21.57	4.67	321	30.25	–	
0.25 to <0.50	17.77	2.24	7 786	23.76	21	
0.50 to <0.75	25.84	2.10	4 573	46.88	19	
0.75 to <2.50	29.10	0.94	11 861	73.43	92	
2.50 to <10.00	28.14	0.99	5 640	95.30	73	
10.00 to <100.00	21.90	0.13	1 155	118.58	35	
100.00 (default)	43.87	4.98	–	–	113	
Total	22.90	1.82	31 380	46.54	353	392

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Sovereign					
	As at 30 June 2019					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	**7 872**	**–**	**–**	**7 872**	**0.04**	**2**
0.15 to <0.25	**32**	**–**	**–**	**2**	**0.17**	**2**
0.25 to <0.50	**154 418**	**2 942**	**52.07**	**140 909**	**0.40**	**38**
0.50 to <0.75	**178**	**175**	**–**	**234**	**0.64**	**46**
0.75 to <2.50	**3 926**	**2 119**	**51.46**	**4 498**	**2.35**	**43**
2.50 to <10.00	**317**	**124**	**16.51**	**381**	**3.66**	**259**
10.00 to <100.00	**251**	**73**	**58.00**	**219**	**10.07**	**1**
100.00 (default)	**107**	**–**	**–**	**107**	**100.00**	**2**
Total	**167 101**	**5 433**	**49.52**	**154 222**	**0.53**	**393**

	Sovereign					
	As at 30 June 2019					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	**17.77**	**0.90**	**336**	**4.27**	**1**	
0.15 to <0.25	**20.79**	**0.18**	**–**	**–**	**–**	
0.25 to <0.50	**8.09**	**2.72**	**17 062**	**12.11**	**46**	
0.50 to <0.75	**25.62**	**1.92**	**104**	**44.44**	**–**	
0.75 to <2.50	**17.97**	**3.35**	**2 328**	**51.76**	**19**	
2.50 to <10.00	**40.20**	**1.59**	**439**	**115.22**	**6**	
10.00 to <100.00	**10.00**	**1.00**	**91**	**41.55**	**2**	
100.00 (default)	**25.41**	**1.20**	**–**	**–**	**3**	
Total	**8.98**	**2.64**	**20 360**	**13.20**	**77**	**245**

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Sovereign					
	As at 30 June 2018					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	8 393	–	–	8 436	0.04	2
0.15 to <0.25	47	–	–	16	0.17	2
0.25 to <0.50	131 634	3 818	52.54	123 409	0.40	145
0.50 to <0.75	462	248	0.09	584	0.67	35
0.75 to <2.50	3 698	3 184	50.19	5 341	2.28	42
2.50 to <10.00	476	68	29.96	510	3.53	105
10.00 to <100.00	85	302	47.95	258	17.98	16
100.00 (default)	437	46	40.00	446	100.00	1
Total	145 232	7 666	49.41	139 000	0.81	348

	Sovereign					
	As at 30 June 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	20.92	0.83	377	4.47	1	
0.15 to <0.25	42.16	0.40	5	31.25	–	
0.25 to <0.50	9.13	2.80	16 668	13.51	45	
0.50 to <0.75	26.36	2.68	283	48.46	1	
0.75 to <2.50	16.63	3.62	2 913	54.54	19	
2.50 to <10.00	40.82	2.27	624	122.35	8	
10.00 to <100.00	25.02	1.84	353	136.82	18	
100.00 (default)	24.20	1.16	–	–	108	
Total	10.41	2.70	21 223	15.27	200	165

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Banks and securities firms					
	As at 30 June 2019					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	**16 535**	**3 142**	**38.43**	**12 688**	**0.06**	**58**
0.15 to <0.25	**20 533**	**4 799**	**55.27**	**12 689**	**0.16**	**41**
0.25 to <0.50	**39 410**	**3 897**	**48.34**	**17 026**	**0.39**	**82**
0.50 to <0.75	**3 514**	**1 090**	**42.42**	**3 560**	**0.65**	**48**
0.75 to <2.50	**30 405**	**1 067**	**22.15**	**3 222**	**2.01**	**93**
2.50 to <10.00	**1 160**	**1 152**	**19.89**	**938**	**4.99**	**271**
10.00 to <100.00	**197**	**138**	**33.97**	**76**	**14.39**	**31**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**
Total	**111 754**	**15 285**	**43.95**	**50 199**	**0.48**	**624**

	Banks and securities firms					
	As at 30 June 2019					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	**29.48**	**1.01**	**1 554**	**12.25**	**2**	
0.15 to <0.25	**36.46**	**0.99**	**3 101**	**24.44**	**7**	
0.25 to <0.50	**32.47**	**0.95**	**6 892**	**40.48**	**21**	
0.50 to <0.75	**32.44**	**1.46**	**1 747**	**49.07**	**7**	
0.75 to <2.50	**51.74**	**0.99**	**4 007**	**124.36**	**34**	
2.50 to <10.00	**42.56**	**1.11**	**1 261**	**134.43**	**21**	
10.00 to <100.00	**33.30**	**0.82**	**90**	**118.42**	**4**	
100.00 (default)	**–**	**–**	**–**	**–**	**–**	
Total	**34.15**	**1.02**	**18 652**	**37.16**	**96**	**102**

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Banks and securities firms					
	As at 30 June 2018					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	27 364	9 151	53.49	35 581	0.02	56
0.15 to <0.25	9 518	5 513	51.37	8 556	0.16	51
0.25 to <0.50	49 574	4 273	46.67	20 958	0.40	86
0.50 to <0.75	1 095	213	22.65	826	0.74	22
0.75 to <2.50	22 836	364	50.73	1 926	1.66	63
2.50 to <10.00	2 184	1 618	20.31	1 724	4.25	52
10.00 to <100.00	93	274	31.25	106	15.01	37
100.00 (default)	–	–	–	–	–	–
Total	112 664	21 406	48.43	69 677	0.33	367

	Banks and securities firms					
	As at 30 June 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	30.36	0.89	1 382	3.88	2	
0.15 to <0.25	31.63	0.95	2 203	25.75	4	
0.25 to <0.50	32.25	0.97	8 687	41.45	27	
0.50 to <0.75	14.30	1.78	254	30.75	1	
0.75 to <2.50	55.57	0.79	2 613	135.67	18	
2.50 to <10.00	46.93	1.07	2 347	136.14	34	
10.00 to <100.00	29.31	0.98	132	124.53	6	
100.00 (default)	–	–	–	–	–	
Total	32.00	0.93	17 618	25.29	92	197

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	SME corporate					
	As at 30 June 2019					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	–	–	–	–	–	–
0.15 to <0.25	6 427	5 631	88.82	11 428	0.17	88
0.25 to <0.50	8 131	4 760	0.06	9 914	0.43	5 192
0.50 to <0.75	4 819	2 055	0.02	5 697	0.61	2 376
0.75 to <2.50	32 737	8 249	2.55	36 359	1.49	14 203
2.50 to <10.00	13 280	3 422	2.73	14 610	4.24	4 148
10.00 to <100.00	2 553	404	0.53	2 957	20.95	432
100.00 (default)	2 147	–	–	2 147	100.00	1 013
Total	70 094	24 521	21.66	83 112	4.84	27 452

	SME corporate					
	As at 30 June 2019					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	–	–	–	–	–	
0.15 to <0.25	26.34	1.00	2 587	22.64	5	
0.25 to <0.50	22.29	2.46	3 103	31.30	9	
0.50 to <0.75	20.20	2.51	1 881	33.02	7	
0.75 to <2.50	20.13	2.07	15 412	42.39	111	
2.50 to <10.00	19.12	1.98	7 804	53.42	118	
10.00 to <100.00	19.16	1.68	2 843	96.14	130	
100.00 (default)	42.77	2.77	72	3.35	919	
Total	21.62	1.99	33 702	40.55	1 299	1 130

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	SME corporate					
	As at 30 June 2018					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	–	1	58.99	1	0.05	21
0.15 to <0.25	10 312	269	5.08	10 326	0.16	389
0.25 to <0.50	7 731	5 749	0.99	9 892	0.43	5 001
0.50 to <0.75	4 574	2 702	0.38	5 781	0.62	2 412
0.75 to <2.50	33 619	9 694	3.12	37 700	1.46	13 220
2.50 to <10.00	11 424	3 049	13.90	13 092	4.17	3 223
10.00 to <100.00	1 646	291	2.56	1 789	18.45	450
100.00 (default)	1 000	9	3.81	1 309	100.00	2 343
Total	70 306	21 764	3.75	79 890	3.55	27 059

	SME corporate					
	As at 30 June 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	73.83	2.50	–	–	–	
0.15 to <0.25	26.44	1.18	2 312	22.39	4	
0.25 to <0.50	22.44	2.25	2 919	29.51	10	
0.50 to <0.75	21.05	2.19	1 871	32.36	8	
0.75 to <2.50	20.73	2.07	16 280	43.18	115	
2.50 to <10.00	22.04	2.00	7 864	60.07	118	
10.00 to <100.00	22.27	1.78	2 198	122.86	72	
100.00 (default)	44.60	3.34	324	24.75	423	
Total	22.34	1.99	33 768	42.27	750	816

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	SME retail					
	As at 30 June 2019					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	48	25	–	60	0.08	580
0.15 to <0.25	19	78	–	46	0.21	1 961
0.25 to <0.50	1 984	1 181	3.58	2 501	0.40	15 662
0.50 to <0.75	1 762	518	10.40	2 018	0.59	13 132
0.75 to <2.50	28 829	10 953	0.34	37 307	1.70	684 613
2.50 to <10.00	24 240	3 218	0.20	26 762	4.02	857 625
10.00 to <100.00	4 472	216	0.83	4 578	29.02	46 816
100.00 (default)	3 368	–	–	3 210	100.00	56 589
Total	64 722	16 189	0.87	76 482	8.20	1 676 978

	SME retail					
	As at 30 June 2019					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	41.12	1.85	6	10.00	–	
0.15 to <0.25	76.95	0.04	16	34.78	–	
0.25 to <0.50	32.20	0.02	526	21.03	3	
0.50 to <0.75	24.01	0.06	405	20.07	3	
0.75 to <2.50	33.60	0.57	16 024	42.95	214	
2.50 to <10.00	38.36	0.86	15 672	58.56	430	
10.00 to <100.00	41.03	0.82	4 342	94.84	575	
100.00 (default)	53.54	0.89	2 651	82.59	2 124	
Total	36.28	0.67	39 642	51.83	3 349	3 319

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	SME retail					
	As at 30 June 2018					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	20	27	–	33	0.09	591
0.15 to <0.25	39	66	–	63	0.20	1 891
0.25 to <0.50	4 271	6 125	0.50	8 599	0.33	64 826
0.50 to <0.75	1 688	500	11.79	1 995	0.60	12 698
0.75 to <2.50	28 434	6 944	0.59	34 045	1.70	612 609
2.50 to <10.00	19 019	1 897	0.49	20 446	3.75	666 692
10.00 to <100.00	3 637	147	3.55	3 820	26.15	53 189
100.00 (default)	2 801	4	–	2 752	100.00	40 325
Total	59 909	15 710	0.92	71 753	7.16	1 452 821

	SME retail					
	As at 30 June 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	57.07	1.25	4	12.12	–	
0.15 to <0.25	59.85	1.20	16	25.40	–	
0.25 to <0.50	34.42	0.01	1 752	20.37	10	
0.50 to <0.75	27.05	0.01	458	22.96	3	
0.75 to <2.50	33.64	0.62	14 664	43.07	200	
2.50 to <10.00	37.11	1.13	11 504	56.27	296	
10.00 to <100.00	40.05	0.95	3 492	91.41	399	
100.00 (default)	50.64	0.97	2 650	96.29	963	
Total	35.56	0.71	34 540	48.14	1 871	1 489

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Retail mortgages					
	As at 30 June 2019					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	**9 462**	**10 533**	**28.20**	**12 432**	**0.08**	**22 285**
0.15 to <0.25	**3 308**	**2 875**	**27.83**	**4 108**	**0.18**	**8 188**
0.25 to <0.50	**20 655**	**11 667**	**56.98**	**27 302**	**0.39**	**30 680**
0.50 to <0.75	**38 606**	**2 528**	**56.35**	**40 030**	**0.62**	**58 513**
0.75 to <2.50	**82 911**	**19 124**	**89.31**	**99 992**	**1.34**	**151 498**
2.50 to <10.00	**38 023**	**11 135**	**6.14**	**38 707**	**4.93**	**54 940**
10.00 to <100.00	**7 403**	**889**	**14.10**	**7 528**	**26.48**	**12 964**
100.00 (default)	**9 564**	**–**	**–**	**9 564**	**100.00**	**19 331**
Total	**209 932**	**58 751**	**50.61**	**239 663**	**6.33**	**358 399**

	Retail mortgages					
	As at 30 June 2019					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	**14.59**		**403**	**3.24**	**2**	
0.15 to <0.25	**15.62**		**251**	**6.11**	**1**	
0.25 to <0.50	**14.16**		**2 726**	**9.98**	**15**	
0.50 to <0.75	**15.90**		**6 181**	**15.44**	**40**	
0.75 to <2.50	**16.22**		**25 707**	**25.71**	**215**	
2.50 to <10.00	**15.20**		**20 005**	**51.68**	**289**	
10.00 to <100.00	**15.71**		**6 507**	**86.44**	**324**	
100.00 (default)	**23.54**		**9 174**	**95.92**	**1 643**	
Total	**15.95**		**70 954**	**29.61**	**2 529**	**2 495**

* *Average maturity not applied for the retail mortgages RWA calculation.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Retail mortgages					
	As at 30 June 2018					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	9 525	10 202	29.40	12 525	0.08	22 436
0.15 to <0.25	3 425	2 622	29.36	4 194	0.18	8 175
0.25 to <0.50	23 435	11 499	48.88	29 056	0.38	34 499
0.50 to <0.75	35 615	2 348	60.51	37 035	0.61	57 417
0.75 to <2.50	76 444	18 589	89.73	93 124	1.35	147 356
2.50 to <10.00	35 024	6 679	26.69	36 807	4.97	59 026
10.00 to <100.00	7 854	769	56.68	8 290	26.92	15 230
100.00 (default)	6 508	15	100.00	6 522	100.00	16 537
Total	197 830	52 723	56.38	227 553	5.36	360 676

	Retail mortgages					
	As at 30 June 2018					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	14.17		394	3.15	2	
0.15 to <0.25	15.05		255	6.08	1	
0.25 to <0.50	14.35		2 936	10.10	17	
0.50 to <0.75	15.80		5 769	15.58	37	
0.75 to <2.50	16.18		24 356	26.15	204	
2.50 to <10.00	15.03		18 905	51.36	274	
10.00 to <100.00	15.39		7 050	85.04	356	
100.00 (default)	18.69		4 378	67.13	993	
Total	15.61		64 043	28.14	1 884	1 438

* *Average maturity not applied for the retail mortgages RWA calculation.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Retail revolving					
	As at 30 June 2019					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	**711**	**4 825**	**49.63**	**3 105**	**0.11**	**107 627**
0.15 to <0.25	**715**	**3 572**	**51.61**	**2 558**	**0.21**	**78 553**
0.25 to <0.50	**2 026**	**6 820**	**55.92**	**5 839**	**0.35**	**202 730**
0.50 to <0.75	**2 459**	**6 841**	**71.93**	**7 380**	**0.62**	**388 412**
0.75 to <2.50	**12 429**	**14 019**	**68.56**	**22 042**	**1.50**	**1 187 137**
2.50 to <10.00	**16 226**	**7 290**	**74.55**	**21 661**	**4.65**	**1 406 037**
10.00 to <100.00	**4 385**	**692**	**77.77**	**4 924**	**24.64**	**816 188**
100.00 (default)	**3 288**	**–**	**–**	**3 288**	**100.00**	**1 321 449**
Total	**42 239**	**44 059**	**64.82**	**70 797**	**8.35**	**5 508 133**

	Retail revolving					
	As at 30 June 2019					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	**71.92**		**156**	**5.02**	**3**	
0.15 to <0.25	**71.59**		**211**	**8.25**	**4**	
0.25 to <0.50	**71.01**		**748**	**12.81**	**15**	
0.50 to <0.75	**70.25**		**1 454**	**19.70**	**32**	
0.75 to <2.50	**70.45**		**8 439**	**38.29**	**233**	
2.50 to <10.00	**71.67**		**18 634**	**86.03**	**722**	
10.00 to <100.00	**70.31**		**8 650**	**175.67**	**850**	
100.00 (default)	**76.26**		**2 363**	**71.87**	**2 464**	
Total	**71.22**		**40 655**	**57.42**	**4 323**	**3 978**

* *Average maturity not applied for the retail revolving RWA calculation.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Retail revolving					
	As at 30 June 2018					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	1 753	9 899	55.64	7 261	0.07	212 958
0.15 to <0.25	1 141	3 448	52.62	2 956	0.20	93 652
0.25 to <0.50	2 731	5 709	56.27	5 943	0.35	230 004
0.50 to <0.75	2 618	5 114	73.28	6 365	0.62	362 815
0.75 to <2.50	12 476	10 470	70.93	19 903	1.49	1 103 791
2.50 to <10.00	11 024	4 743	75.22	14 592	4.71	1 234 156
10.00 to <100.00	3 335	501	75.39	3 713	26.35	729 430
100.00 (default)	1 408	33	100.00	1 441	100.00	1 122 453
Total	36 486	39 917	64.35	62 174	5.59	5 089 259

	Retail revolving					
	As at 30 June 2018					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	72.53		255	3.51	4	
0.15 to <0.25	71.53		237	8.02	4	
0.25 to <0.50	70.69		749	12.60	15	
0.50 to <0.75	69.69		1 238	19.45	27	
0.75 to <2.50	70.21		7 555	37.96	208	
2.50 to <10.00	70.58		12 417	85.09	484	
10.00 to <100.00	69.36		6 616	178.18	680	
100.00 (default)	69.05		447	31.02	1 028	
Total	70.55		29 514	47.47	2 450	1 788

* *Average maturity not applied for the retail revolving RWA calculation.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Other retail					
	As at 30 June 2019					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	**3**	**19**	**61.67**	**15**	**0.09**	**26**
0.15 to <0.25	**4**	**17**	**61.19**	**14**	**0.20**	**626**
0.25 to <0.50	**317**	**106**	**63.07**	**384**	**0.43**	**7 284**
0.50 to <0.75	**3 104**	**488**	**66.95**	**3 430**	**0.55**	**26 145**
0.75 to <2.50	**42 274**	**296**	**75.85**	**42 498**	**1.75**	**392 414**
2.50 to <10.00	**50 742**	**507**	**147.97**	**51 249**	**5.01**	**712 513**
10.00 to <100.00	**13 556**	**65**	**325.97**	**13 621**	**28.61**	**293 177**
100.00 (default)	**12 225**	**–**	**–**	**12 225**	**100.00**	**237 347**
Total	**122 225**	**1 498**	**107.04**	**123 436**	**15.76**	**1 669 532**

	Other retail					
	As at 30 June 2019					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	**74.77**		**3**	**20.00**	**–**	
0.15 to <0.25	**76.12**		**5**	**35.71**	**–**	
0.25 to <0.50	**45.45**		**122**	**31.77**	**1**	
0.50 to <0.75	**24.97**		**694**	**20.23**	**1**	
0.75 to <2.50	**28.04**		**15 577**	**36.65**	**15**	
2.50 to <10.00	**48.90**		**39 581**	**77.23**	**598**	
10.00 to <100.00	**49.74**		**15 452**	**113.44**	**805**	
100.00 (default)	**56.17**		**5 479**	**44.82**	**3 013**	
Total	**41.86**		**76 913**	**62.31**	**4 433**	**10 798**

* *Average maturity not applied for the other retail RWA calculation.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Other retail					
	As at 30 June 2018					
PD scale	Original on-balance sheet gross exposures R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to <0.15	4	29	59.08	21	0.10	134
0.15 to <0.25	3	13	59.13	10	0.20	548
0.25 to <0.50	296	83	61.85	347	0.43	7 239
0.50 to <0.75	2 693	473	65.66	3 003	0.55	25 973
0.75 to <2.50	40 714	379	75.38	40 999	1.74	395 187
2.50 to <10.00	47 916	296	185.19	48 464	4.92	667 382
10.00 to <100.00	12 740	30	561.95	12 909	30.05	292 252
100.00 (default)	7 777	–	–	7 777	100.00	117 291
Total	112 143	1 303	106.61	113 530	13.01	1 506 006

	Other retail					
	As at 30 June 2018					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to <0.15	74.86		4	19.05	–	
0.15 to <0.25	76.42		3	30.00	–	
0.25 to <0.50	44.65		109	31.41	1	
0.50 to <0.75	24.82		605	20.15	4	
0.75 to <2.50	27.05		14 460	35.27	197	
2.50 to <10.00	47.37		36 001	74.28	1 186	
10.00 to <100.00	48.42		14 111	109.31	1 852	
100.00 (default)	47.14		12 327	158.51	2 811	
Total	39.54		77 620	68.37	6 051	5 138

* *Average maturity not applied for the other retail RWA calculation.*

Effect on RWA of credit derivatives used as credit risk mitigation techniques

The following table illustrates the effect of credit derivatives on the capital requirement calculation under the AIRB approach. As the group does not apply the foundation internal ratings-based approach, the rows related to this approach have been excluded from the CR7 table. Pre-credit derivatives RWA (before taking credit derivatives' mitigation effect into account) has been selected to assess the impact of credit derivatives on RWA, irrespective of how the credit risk mitigation technique feeds into the RWA calculation. No credit derivatives were applied as credit risk mitigation during the year. There were no exposures in the equity and purchased receivables portfolios in the year under review. Rows 14 and 16 were therefore excluded from this table.

CR7: AIRB – EFFECT ON RWA OF CREDIT DERIVATIVES USED AS CREDIT RISK MITIGATION TECHNIQUES

	Pre-credit derivatives RWA	
R million	**As at 30 June 2019**	As at 30 June 2018
2. Sovereign	**20 361**	21 193
4. Banks and securities firms	**18 429**	16 892
6. Corporate	**101 631**	99 492
8. Specialised lending	**51 997**	50 386
SME corporate	**33 703**	33 767
9. Retail revolving	**40 655**	29 515
10. Retail mortgages	**70 954**	64 043
11. SME retail	**39 645**	34 540
12. Other retail	**76 912**	77 622
17. **Total**	**454 287**	427 450

RWA flow statement of credit risk exposure under AIRB

The calculation of credit RWA for FRB SA is based on internally developed, quantitative models in line with the AIRB approach. The three credit risk measures, namely PD, EAD and LGD, are used along with prescribed correlations (dependent on the asset class) and estimates of maturity, where applicable, to derive credit RWA. The quantitative models also adhere to the AIRB requirements related to annual validation.

For the remaining entities, credit RWA is based on the standardised approach where regulatory risk weights are prescribed per asset class. Even though the remaining entities do not have regulatory approval to use the AIRB approach, internally developed quantitative models are used for internal assessment of credit risk.

The following table presents a flow statement explaining variations in the credit RWA determined under the AIRB approach.

CR8: RWA FLOW STATEMENT OF CREDIT RISK EXPOSURES UNDER AIRB

R million		RWA
1.	**RWA at 31 March 2019**	**450 771**
2.	Asset size	**3 516**
3.	Asset quality	**–**
4.	Model updates	**–**
5.	Methodology and policy	**–**
6.	Acquisitions and disposals	**–**
7.	Foreign exchange movements	**–**
8.	Other	**–**
9.	**RWA at 30 June 2019***	**454 287**

* *The RWA represents the AIRB credit risk exposures excluding securitisation exposure per OV1: Overview of credit RWA table on page 43.*

Back testing of PD per portfolio

The following table provides back testing data to validate the reliability of PD calculations. Comparison of the PD used in AIRB capital calculations with the effective default rates of bank obligors is done using a minimum five-year average annual default rate to allow for stable quantities to be compared.

CR9: AIRB – BACKTESTING OF PD PER PORTFOLIO

	Corporate							
	As at 30 June 2019							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	**Weighted average PD %**	**Arithmetic average PD by obligors %**	**End of prior year**	**End of current year**	**During current year**	**New during current year**	**Average historical annual default rate %**
0.00 to <0.12	AAA, AA, A	**0.08**	**–**	**7**	**1**	**–**	**–**	**–**
0.12 to <0.45	BBB	**0.29**	**0.05**	**124**	**118**	**–**	**–**	**–**
0.45 to <1.08	BB+, BB	**0.64**	**0.15**	**164**	**144**	**–**	**–**	**–**
1.08 to <1.80	BB-	**1.44**	**0.23**	**100**	**101**	**–**	**–**	**–**
1.80 to <3.23	B+	**2.45**	**0.33**	**89**	**85**	**–**	**–**	**–**
3.23 to <9.12	B	**5.27**	**0.87**	**90**	**104**	**–**	**–**	**–**
9.12 to <18.23	B-	**10.07**	**0.81**	**51**	**51**	**–**	**–**	**–**
18.23 to <99.99	Below B-	**35.96**	**1.02**	**11**	**18**	**–**	**–**	**–**
100.00 (default)	Defaulted	**100.00**	**100.00**	**8**	**10**	**10**	**2**	**100.00**
Total		**2.22**	**0.38**	**644**	**632**	**10**	**2**	**0.43**

	Corporate							
	As at 30 June 2018							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %*	End of prior year	End of current year	During current year	New during current year	Average historical annual default rate %
0.00 to <0.12	AAA, AA, A	0.08	–	8	7	–	–	–
0.12 to <0.45	BBB	0.30	0.06	128	124	–	–	–
0.45 to <1.08	BB+, BB	0.64	0.16	165	164	–	–	–
1.08 to <1.80	BB-	1.22	0.19	81	100	–	–	–
1.80 to <3.23	B+	2.45	0.34	101	89	–	–	–
3.23 to <9.12	B	4.32	0.60	74	90	–	–	–
9.12 to <18.23	B-	10.07	0.80	47	51	–	–	–
18.23 to <99.99	Below B-	35.96	0.61	3	11	–	–	–
100.00 (default)	Defaulted	100.00	100.00	6	8	8	2	100.00
Total		1.18	0.35	613	644	8	2	0.29

** The overprediction in the corporate portfolio was due to the conservative SME corporate PD as well as the large corporate PD model.*

CR9: AIRB – BACKTESTING OF PD PER PORTFOLIO continued

	Specialised lending							
	As at 30 June 2019							
				Number of obligors		Defaulted obligors		Average historical annual default rate %
PD scale	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of prior year	End of current year	During current year	New during current year	
0.00 to <0.12	AAA, AA, A	**0.06**	**–**	**1**	**–**	**–**	**–**	**–**
0.12 to <0.45	BBB	**0.33**	**0.06**	**21**	**25**	**–**	**–**	**–**
0.45 to <1.08	BB+, BB	**0.74**	**0.76**	**250**	**254**	**–**	**–**	**–**
1.08 to <1.80	BB-	**1.49**	**1.28**	**293**	**291**	**4**	**4**	**–**
1.80 to <3.23	B+	**2.46**	**2.33**	**432**	**389**	**9**	**9**	**–**
3.23 to <9.12	B	**4.23**	**4.26**	**149**	**211**	**–**	**–**	**–**
9.12 to <18.23	B-	**12.73**	**11.85**	**58**	**158**	**30**	**30**	**–**
18.23 to <99.99	Below B-	**27.01**	**27.08**	**13**	**27**	**6**	**6**	**–**
100.00 (default)	Defaulted	**100.00**	**100.00**	**29**	**28**	**220**	**9**	**100.00**
Total		**2.63**	**5.93**	**1 246**	**1 383**	**269**	**58**	**0.21**

	Specialised lending							
	As at 30 June 2018							
				Number of obligors		Defaulted obligors		Average historical annual default rate %
PD scale	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of prior year	End of current year	During current year	New during current year	
0.00 to <0.12	AAA, AA, A	0.08	–	8	1	–	–	–
0.12 to <0.45	BBB	0.33	0.05	76	21	–	–	–
0.45 to <1.08	BB+, BB	0.70	0.79	516	250	–	–	–
1.08 to <1.80	BB-	1.31	1.33	212	293	7	7	1.18
1.80 to <3.23	B+	2.47	2.44	117	432	–	–	–
3.23 to <9.12	B	5.25	3.89	146	149	–	–	–
9.12 to <18.23	B-	12.38	11.70	7	58	–	–	–
18.23 to <99.99	Below B-	27.00	27.00	50	13	–	–	–
100.00 (default)	Defaulted	100.00	100.00	28	29	259	70	100.00
Total		1.92	5.90	1 160	1 246	266	77	1.23

CR9: AIRB – BACKTESTING OF PD PER PORTFOLIO continued

	Sovereign							
	As at 30 June 2019							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	**Weighted average PD %**	**Arithmetic average PD by obligors %**	**End of prior year**	**End of current year**	**During current year**	**New during current year**	**Average historical annual default rate %**
0.00 to <0.12	AAA, AA, A	**0.04**	**–**	**2**	**2**	**–**	**–**	**–**
0.12 to <0.45	BBB	**0.40**	**0.26**	**140**	**30**	**–**	**–**	**–**
0.45 to <1.08	BB+, BB	**0.52**	**0.53**	**52**	**67**	**–**	**–**	**–**
1.08 to <1.80	BB-	**1.57**	**1.14**	**26**	**25**	**–**	**–**	**–**
1.80 to <3.23	B+	**2.45**	**2.16**	**25**	**28**	**–**	**–**	**–**
3.23 to <9.12	B	**4.41**	**5.80**	**86**	**238**	**24**	**–**	**0.05**
9.12 to <18.23	B-	**10.07**	**10.01**	**6**	**2**	**–**	**–**	**–**
18.23 to <99.99	Below B-	**34.67**	**38.60**	**10**	**–**	**–**	**–**	**–**
100.00 (default)	Defaulted	**100.00**	**100.00**	**1**	**1**	**2**	**–**	**100.00**
Total		**0.53**	**7.95**	**348**	**393**	**26**	**–**	**0.12**

	Sovereign							
	As at 30 June 2018							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of prior year	End of current year	During current year	New during current year	Average historical annual default rate %
0.00 to <0.12	AAA, AA, A	0.04	–	2	2	–	–	–
0.12 to <0.45	BBB	0.40	0.32	41	140	–	–	–
0.45 to <1.08	BB+, BB	0.57	0.53	48	52	–	–	–
1.08 to <1.80	BB-	1.36	1.06	27	26	–	–	–
1.80 to <3.23	B+	2.45	2.02	27	25	–	–	–
3.23 to <9.12	B	3.92	4.81	184	86	–	–	–
9.12 to <18.23	B-	10.12	10.01	1	6	–	–	–
18.23 to <99.99	Below B-	34.67	32.18	5	10	–	–	–
100.00 (default)	Defaulted	100.00	100.00	–	1	1	1	100.00
Total		0.81	6.37	335	348	1	1	0.10

CR9: AIRB – BACKTESTING OF PD PER PORTFOLIO continued

	Banks and securities firms							
	As at 30 June 2019							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	**Weighted average PD %**	**Arithmetic average PD by obligors %**	**End of prior year**	**End of current year**	**During current year**	**New during current year**	**Average historical annual default rate %**
0.00 to <0.12	AAA, AA, A	**0.06**	**0.01**	**56**	**56**	**–**	**–**	**–**
0.12 to <0.45	BBB	**0.25**	**0.07**	**113**	**113**	**–**	**–**	**–**
0.45 to <1.08	BB+, BB	**0.55**	**0.09**	**46**	**46**	**–**	**–**	**–**
1.08 to <1.80	BB-	**1.15**	**0.09**	**35**	**35**	**–**	**–**	**–**
1.80 to <3.23	B+	**2.45**	**0.24**	**28**	**28**	**–**	**–**	**–**
3.23 to <9.12	B	**5.33**	**0.69**	**52**	**252**	**–**	**–**	**–**
9.12 to <18.23	B-	**10.07**	**0.78**	**28**	**84**	**–**	**–**	**–**
18.23 to <99.99	Below B-	**35.96**	**0.54**	**9**	**9**	**–**	**–**	**–**
100.00 (default)	Defaulted	**100.00**	**100.00**	**–**	**1**	**1**	**1**	**100.00**
Total		**0.48**	**0.38**	**367**	**624**	**1**	**1**	**1.19**

	Banks and securities firms							
	As at 30 June 2018							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of prior year	End of current year	During current year	New during current year	Average historical annual default rate %
0.00 to <0.12	AAA, AA, A	0.02	–	52	56	–	–	–
0.12 to <0.45	BBB	0.32	0.10	109	113	–	–	–
0.45 to <1.08	BB+, BB	0.53	0.07	53	46	–	–	–
1.08 to <1.80	BB-	1.12	0.11	26	35	–	–	–
1.80 to <3.23	B+	2.45	0.19	34	28	–	–	–
3.23 to <9.12	B	4.25	0.60	47	52	–	–	–
9.12 to <18.23	B-	10.07	0.77	31	28	–	–	–
18.23 to <99.99	Below B-	35.96	0.88	6	9	–	–	–
100.00 (default)	Defaulted	–	–	–	–	–	–	–
Total		0.33	0.34	358	367	–	–	–

CR9: AIRB – BACKTESTING OF PD PER PORTFOLIO continued

	SME corporate							
	As at 30 June 2019							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	**Weighted average PD %**	**Arithmetic average PD by obligors %**	**End of prior year**	**End of current year**	**During current year**	**New during current year**	**Average historical annual default rate %**
0.00 to <0.12	AAA, AA, A	**0.07**	**0.06**	**19**	**17**	**–**	**–**	**0.01**
0.12 to <0.45	BBB	**0.29**	**0.40**	**4 852**	**4 882**	**22**	**22**	**0.37**
0.45 to <1.08	BB+, BB	**0.80**	**0.87**	**10 238**	**9 549**	**88**	**88**	**0.35**
1.08 to <1.80	BB-	**1.37**	**1.38**	**3 634**	**4 191**	**136**	**128**	**0.59**
1.80 to <3.23	B+	**2.33**	**2.42**	**2 840**	**3 911**	**131**	**102**	**1.24**
3.23 to <9.12	B	**4.71**	**4.49**	**2 557**	**3 444**	**241**	**238**	**3.58**
9.12 to <18.23	B-	**13.14**	**12.73**	**465**	**301**	**146**	**145**	**5.86**
18.23 to <99.99	Below B-	**26.79**	**27.80**	**111**	**162**	**144**	**144**	**8.17**
100.00 (default)	Defaulted	**100.00**	**100.00**	**2 343**	**995**	**6 711**	**3 433**	**100.00**
Total		**4.84**	**6.27**	**27 059**	**27 452**	**7 619**	**4 300**	**4.94**

	SME corporate							
	As at 30 June 2018							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	Weighted average PD %*	Arithmetic average PD by obligors %	End of prior year	End of current year	During current year	New during current year	Average historical annual default rate %*
0.00 to <0.12	AAA, AA, A	0.05	0.05	36	19	–	–	1.02
0.12 to <0.45	BBB	0.28	0.39	7 515	4 852	32	27	0.95
0.45 to <1.08	BB+, BB	0.79	0.85	9 017	10 238	61	61	1.15
1.08 to <1.80	BB-	1.39	1.36	9 683	3 634	126	126	1.73
1.80 to <3.23	B+	2.36	2.36	5 459	2 840	49	47	3.70
3.23 to <9.12	B	4.90	4.66	3 930	2 557	322	306	5.81
9.12 to <18.23	B-	12.69	12.16	679	465	95	93	8.75
18.23 to <99.99	Below B-	28.49	34.60	443	111	51	51	33.58
100.00 (default)	Defaulted	100.00	100.00	2 619	2 343	2 159	869	100.00
Total		3.55	7.05	39 381	27 059	2 895	1 580	3.99

* *The weighted average PD was consistently in line with actual default rates.*

CR9: AIRB – BACKTESTING OF PD PER PORTFOLIO continued

	SME retail							
	As at 30 June 2019							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	**Weighted average PD %**	**Arithmetic average PD by obligors %**	**End of prior year**	**End of current year**	**During current year**	**New during current year**	**Average historical annual default rate %**
0.00 to <0.12	AAA, AA, A	**0.08**	**0.07**	**358**	**387**	**5**	**5**	**0.26**
0.12 to <0.45	BBB	**0.39**	**0.34**	**65 990**	**16 758**	**715**	**715**	**0.61**
0.45 to <1.08	BB+, BB	**0.75**	**0.82**	**38 372**	**37 523**	**366**	**355**	**1.31**
1.08 to <1.80	BB-	**1.32**	**1.41**	**178 140**	**214 920**	**2 487**	**2 471**	**0.69**
1.80 to <3.23	B+	**2.46**	**2.33**	**542 524**	**516 718**	**53 662**	**53 550**	**2.54**
3.23 to <9.12	B	**5.02**	**5.39**	**532 575**	**785 828**	**55 571**	**55 485**	**7.25**
9.12 to <18.23	B-	**12.94**	**13.26**	**40 743**	**27 526**	**5 372**	**5 307**	**19.12**
18.23 to <99.99	Below B-	**38.63**	**40.19**	**13 794**	**20 729**	**4 054**	**3 856**	**46.40**
100.00 (default)	Defaulted	**100.00**	**100.00**	**40 325**	**56 589**	**26 538**	**8 033**	**100.00**
Total		**8.20**	**7.98**	**1 452 821**	**1 676 978**	**148 770**	**129 777**	**6.61**

	SME retail							
	As at 30 June 2018							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %*	End of prior year	End of current year	During current year	New during current year	Average historical annual default rate %
0.00 to <0.12	AAA, AA, A	0.07	0.07	7 826	358	141	141	0.80
0.12 to <0.45	BBB	0.33	0.33	55 733	65 990	1 016	1 016	0.78
0.45 to <1.08	BB+, BB	0.76	0.75	24 865	38 372	527	515	1.77
1.08 to <1.80	BB-	1.38	1.43	27 207	178 140	484	474	1.49
1.80 to <3.23	B+	2.45	2.30	108 299	542 524	19 741	19 683	3.34
3.23 to <9.12	B	4.72	4.64	983 281	532 575	104 608	104 540	9.68
9.12 to <18.23	B-	12.64	10.83	14 666	40 743	2 273	2 157	31.78
18.23 to <99.99	Below B-	36.73	36.27	11 424	13 794	3 066	2 782	79.93
100.00 (default)	Defaulted	100.00	100.00	23 207	40 325	22 918	4 212	100.00
Total		7.16	7.08	1 256 508	1 452 821	154 774	135 520	7.27

* *The overprediction evident in this portfolio was due to the conservative buffers included in the SME retail PD model.*

CR9: AIRB – BACKTESTING OF PD PER PORTFOLIO continued

		Retail mortgages						
		As at 30 June 2019						
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	**Weighted average PD %**	**Arithmetic average PD by obligors %**	**End of prior year**	**End of current year**	**During current year**	**New during current year**	**Average historical annual default rate %**
0.00 to <0.12	AAA, AA, A	**0.08**	**0.08**	**19 398**	**19 861**	**4**	**–**	**–**
0.12 to <0.45	BBB	**0.32**	**0.29**	**38 843**	**32 220**	**8**	**–**	**–**
0.45 to <1.08	BB+, BB	**0.71**	**0.71**	**100 964**	**105 934**	**46**	**–**	**0.06**
1.08 to <1.80	BB-	**1.35**	**1.37**	**78 537**	**82 042**	**119**	**–**	**0.04**
1.80 to <3.23	B+	**2.40**	**2.41**	**46 781**	**46 468**	**206**	**–**	**0.06**
3.23 to <9.12	B	**5.20**	**4.97**	**41 910**	**37 418**	**233**	**–**	**0.10**
9.12 to <18.23	B-	**12.55**	**12.22**	**9 862**	**8 599**	**163**	**–**	**0.23**
18.23 to <99.99	Below B-	**36.64**	**39.20**	**7 857**	**6 526**	**223**	**–**	**0.86**
100.00 (default)	Defaulted	**100.00**	**100.00**	**16 537**	**19 331**	**9 323**	**118**	**100.00**
Total		**6.33**	**7.66**	**360 689**	**358 399**	**10 325**	**118**	**0.07**

		Retail mortgages						
		As at 30 June 2018						
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of prior year	End of current year	During current year	New during current year	Average historical annual default rate %
0.00 to <0.12	AAA, AA, A	0.08	0.08	18 139	19 398	2	–	0.18
0.12 to <0.45	BBB	0.33	0.30	38 630	38 843	3	–	0.17
0.45 to <1.08	BB+, BB	0.71	0.71	97 716	100 964	31	–	0.49
1.08 to <1.80	BB-	1.35	1.36	77 990	78 537	62	–	0.92
1.80 to <3.23	B+	2.39	2.40	48 248	46 781	102	1	2.00
3.23 to <9.12	B	5.18	4.96	42 837	41 910	179	4	3.92
9.12 to <18.23	B-	12.61	12.20	10 690	9 862	152	2	10.12
18.23 to <99.99	Below B-	37.74	39.80	8 932	7 857	599	13	40.78
100.00 (default)	Defaulted	100.00	100.00	16 302	16 537	7 404	79	100.00
Total		5.36	7.73	359 484	360 689	8 534	99	2.84

CR9: AIRB – BACKTESTING OF PD PER PORTFOLIO continued

		Retail revolving						
		As at 30 June 2019						
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	**Weighted average PD %**	**Arithmetic average PD by obligors %**	**End of prior year**	**End of current year**	**During current year**	**New during current year**	**Average historical annual default rate %**
0.00 to <0.12	AAA, AA, A	**0.10**	**0.09**	**176 531**	**77 877**	**71**	**6**	**0.01**
0.12 to <0.45	BBB	**0.28**	**0.28**	**338 490**	**286 392**	**240**	**16**	**0.02**
0.45 to <1.08	BB+, BB	**0.73**	**0.74**	**652 217**	**721 771**	**2 141**	**17**	**0.02**
1.08 to <1.80	BB-	**1.41**	**1.42**	**493 617**	**499 355**	**3 205**	**16**	**0.04**
1.80 to <3.23	B+	**2.45**	**2.46**	**625 273**	**692 747**	**6 821**	**64**	**0.06**
3.23 to <9.12	B	**5.07**	**5.38**	**886 764**	**1 024 063**	**24 579**	**864**	**0.12**
9.12 to <18.23	B-	**11.79**	**12.72**	**365 532**	**411 433**	**22 694**	**2 348**	**0.29**
18.23 to <99.99	Below B-	**39.09**	**39.26**	**428 382**	**473 046**	**40 197**	**6 390**	**0.72**
100.00 (default)	Defaulted	**100.00**	**100.00**	**1 122 453**	**1 321 449**	**245 908**	**35 121**	**100.00**
Total		**8.35**	**7.79**	**5 089 259**	**5 508 133**	**345 856**	**44 842**	**0.20**

		Retail revolving						
		As at 30 June 2018						
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of prior year	End of current year	During current year	New during current year	Average historical annual default rate %
0.00 to <0.12	AAA, AA, A	0.06	0.07	144 474	176 531	6	–	0.71
0.12 to <0.45	BBB	0.27	0.27	324 566	338 490	37	1	0.71
0.45 to <1.08	BB+, BB	0.73	0.73	617 915	652 217	466	3	1.25
1.08 to <1.80	BB-	1.42	1.41	447 601	493 617	1 155	15	2.09
1.80 to <3.23	B+	2.43	2.46	561 769	625 273	3 717	40	3.24
3.23 to <9.12	B	5.23	5.44	780 759	886 764	20 712	660	6.78
9.12 to <18.23	B-	12.08	12.74	341 198	365 532	21 196	2 001	13.93
18.23 to <99.99	Below B-	38.67	39.22	370 808	428 382	36 950	6 274	37.31
100.00 (default)	Defaulted	100.00	100.00	1 008 183	1 122 453	150 810	31 105	100.00
Total		5.59	7.79	4 597 273	5 089 259	235 049	40 099	8.00

CR9: AIRB – BACKTESTING OF PD PER PORTFOLIO continued

	Other retail							
	As at 30 June 2019							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	**Weighted average PD %***	**Arithmetic average PD by obligors %**	**End of prior year**	**End of current year**	**During current year**	**New during current year**	**Average historical annual default rate %**
0.00 to <0.12	AAA, AA, A	**0.07**	**0.07**	**122**	**16**	**–**	**–**	**0.07**
0.12 to <0.45	BBB	**0.36**	**0.35**	**4 684**	**43 771**	**39**	**1**	**0.06**
0.45 to <1.08	BB+, BB	**0.73**	**0.72**	**59 080**	**124 637**	**162**	**11**	**0.03**
1.08 to <1.80	BB-	**1.50**	**1.49**	**183 017**	**230 849**	**345**	**56**	**0.03**
1.80 to <3.23	B+	**2.35**	**2.41**	**283 233**	**213 531**	**653**	**109**	**0.07**
3.23 to <9.12	B	**5.29**	**5.68**	**525 726**	**495 983**	**1 127**	**69**	**0.18**
9.12 to <18.23	B-	**11.93**	**12.32**	**166 045**	**206 645**	**1 374**	**29**	**0.40**
18.23 to <99.99	Below B-	**38.42**	**38.09**	**166 808**	**154 188**	**22 873**	**2 094**	**1.24**
100.00 (default)	Defaulted	**100.00**	**100.00**	**117 291**	**199 912**	**154 960**	**50 554**	**100.00**
Total		**15.76**	**7.60**	**1 506 006**	**1 669 532**	**181 533**	**52 923**	**0.51**

** The weighted average PD was consistently in line with the actual default rate.*

	Other retail							
	As at 30 June 2018							
				Number of obligors		Defaulted obligors		
PD scale	External rating equivalent	Weighted average PD %*	Arithmetic average PD by obligors %	End of prior year	End of current year	During current year	New during current year	Average historical annual default rate %
0.00 to <0.12	AAA, AA, A	0.08	0.07	141	122	–	–	6.16
0.12 to <0.45	BBB	0.36	0.35	18 223	4 684	12	–	4.26
0.45 to <1.08	BB+, BB	0.74	0.74	76 469	59 080	139	6	2.02
1.08 to <1.80	BB-	1.49	1.47	177 144	183 017	355	13	3.05
1.80 to <3.23	B+	2.36	2.37	266 633	283 233	652	54	3.39
3.23 to <9.12	B	5.22	5.49	480 287	525 726	1 727	107	5.22
9.12 to <18.23	B-	11.91	12.32	151 629	166 045	1 532	103	7.43
18.23 to <99.99	Below B-	39.56	40.16	168 818	166 808	7 441	700	13.92
100.00 (default)	Defaulted	100.00	100.00	116 642	117 291	79 813	21 018	100.00
Total		13.01	7.87	1 455 986	1 506 006	91 671	22 001	6.48

** The weighted average PD was consistently in line with the actual default rate.*

CREDIT RISK UNDER STANDARDISED APPROACH

For regulatory capital purposes, the group predominantly uses the AIRB approach for FRB SA exposures, and the standardised approach for the group's other legal entities, the bank's foreign branches and Aldermore. Due to the relatively small size of the subsidiaries and the scarcity of relevant data, the group plans to continue using the standardised approach for the foreseeable future for the majority of these portfolios.

For portfolios using the standardised approach, only S&P ratings are used. As external ratings are not available for all jurisdictions and for certain parts of the portfolio, the group uses its internally developed mapping between FR grades and S&P grades (refer to the *Mapping of FirstRand (FR) grades to rating agency scales* table on page 78).

For cases where the bank invests in particular debt issuance, the risk weight of claims is based on these assessments. If the investment is not in a specific assessed issuance, then the following factors apply when determining the applicable assessments in accordance with Basel prescriptions:

- borrower's issuer assessment;
- borrower's specific assessment on issued debt;
- ranking of the unassessed claim; and
- entire amount of credit risk exposure the bank has.

The following table provides the credit risk exposures, credit risk mitigation effects and RWA for standardised approach exposures per asset class. RWA density is the ratio of RWA to exposures post-CCF and -CRM. There are no exposures to multilateral development banks, secured by commercial real estate, equity, past due advances, higher-risk categories and other asset categories. Rows 3 and 9 – 13 were therefore excluded from this table.

CR4: STANDARDISED APPROACH – CREDIT RISK EXPOSURE AND CREDIT RISK MITIGATION EFFECTS

		As at 30 June 2019					
		Exposures before CCF and CRM		**Exposure post-CCF and -CRM**		**RWA and RWA density**	
R million		**On-balance sheet amount**	**Off-balance sheet amount**	**On-balance sheet amount**	**Off-balance sheet amount**	**RWA**	**RWA density %**
	Asset classes						
1.	Sovereigns and their central banks	**61 719**	**187**	**31 170**	**–**	**26 911**	**0.86**
2.	Non-central government public sector entities	**4 000**	**810**	**1 170**	**–**	**1 038**	**0.89**
4.	Banks	**12 958**	**272**	**10 015**	**260**	**3 439**	**0.33**
5.	Securities firms	**1**	**–**	**1**	**–**	**–**	**–**
6.	Corporates	**105 529**	**24 032**	**86 249**	**6 363**	**113 072**	**1.22**
7.	Regulatory retail portfolios	**67 610**	**13 320**	**34 841**	**24**	**54 273**	**1.56**
8.	Secured by residential property	**141 847**	**8 272**	**121 894**	**1 278**	**51 705**	**0.42**
14.	**Total**	**393 664**	**46 893**	**285 340**	**7 925**	**250 438**	**85.40**

		As at 30 June 2018					
		Exposures before CCF and CRM		Exposure post-CCF and -CRM		RWA and RWA density	
R million		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density %
	Asset classes						
1.	Sovereigns and their central banks	47 607	114	42 333	4	19 045	44.98
2.	Non-central government public sector entities	3 547	929	4 387	250	1 799	38.80
4.	Banks	28 664	857	26 553	752	6 314	23.12
5.	Securities firms	–	–	–	–	–	–
6.	Corporates	108 373	23 167	93 903	8 780	99 305	96.71
7.	Regulatory retail portfolios	59 163	10 312	50 983	1 548	48 569	92.46
8.	Secured by residential property	126 221	5 471	126 218	1 707	46 186	36.10
14.	**Total**	373 575	40 850	344 377	13 041	221 218	60.32

The following tables provide a breakdown of exposures rated through the standardised approach by asset class to show the effect of credit risk mitigation. Further breakdown by risk weight per asset class is shown where the risk weights used are those prescribed in the Regulations and will differ primarily by asset class as well as credit rating. There are no exposures to multilateral development banks, secured by commercial real estate, equity, past due advances, higher-risk categories and other asset categories. Rows 3 and 9 – 13 were therefore excluded from this table.

CR5: STANDARDISED APPROACH – EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS

	As at 30 June 2019									
	Risk weight									**Total credit exposures amount (post-CCF and post-CRM)**
R million	**0%**	**10%**	**20%**	**35%**	**50%**	**75%**	**100%**	**150%**	**Others**	
Asset classes										
1. Sovereigns and their central banks	**29 468**	**–**	**128**	**–**	**–**	**–**	**1 574**	**–**	**–**	**31 170**
2. Non-central government public sector entities	**–**	**–**	**3**	**–**	**852**	**–**	**316**	**–**	**–**	**1 171**
4. Banks	**–**	**–**	**7 943**	**–**	**1 977**	**–**	**356**	**–**	**–**	**10 276**
5. Securities firms	**–**	**–**	**–**	**–**	**1**	**–**	**–**	**–**	**–**	**1**
6. Corporates	**3**	**–**	**786**	**–**	**6 860**	**1 053**	**82 960**	**948**	**–**	**92 610**
7. Regulatory retail portfolios	**237**	**–**	**–**	**–**	**51**	**34 464**	**94**	**19**	**–**	**34 865**
8. Secured by residential property	**52**	**–**	**–**	**122 062**	**–**	**1 058**	**–**	**–**	**–**	**123 172**
14. **Total**	**29 760**	**–**	**8 860**	**122 062**	**9 741**	**36 575**	**85 300**	**967**	**–**	**293 265**

	As at 30 June 2018									
	Risk weight									Total credit exposures amount (post-CCF and post-CRM)
R million	0%	10%	20%	35%	50%	75%	100%	150%	Others	
Asset classes										
1. Sovereigns and their central banks	22 403	–	57	–	588	15 430	3 858	–	–	42 336
2. Non-central government public sector entities	–	–	51	–	4 025	–	561	–	–	4 637
4. Banks	6 604	–	6 845	–	13 130	–	726	–	–	27 305
5. Securities firms	–	–	–	–	–	–	–	–	–	–
6. Corporates	–	–	1 926	–	14 049	1 317	81 371	323	3 697	102 683
7. Regulatory retail portfolios	–	–	–	–	–	52 529	2	–	–	52 531
8. Secured by residential property	206	–	–	126 540	–	1 150	29	–	–	127 925
14. **Total**	29 213	–	8 879	126 540	31 792	70 426	86 547	323	3 697	357 417

SPECIALISED LENDING EXPOSURES UNDER SLOTTING APPROACH

The following table provides information relating to specialised lending exposures that are rated through the slotting approach. The exposures are split among regulatory asset classes.

CR10: AIRB SPECIALISED LENDING

R million		As at 30 June 2019							
		Other than high-volatility commercial estate*							
					Exposure amount				
Regulatory categories	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Risk weight	Project finance	Income-producing real estate	Total	RWA	Expected losses
Strong	Less than 2.5 years	–	–	50%	–	–	–	–	–
	Equal to or more than 2.5 years	11 809	2 213	70%	12 850	–	12 850	9 535	51
Good	Less than 2.5 years	–	–	70%	–	–	–	–	–
	Equal to or more than 2.5 years	4 013	282	90%	4 083	22	4 105	3 916	33
Satisfactory		1 835	–	115%	1 689	147	1 835	2 246	53
Weak		12	–	250%	–	12	12	33	1
Total		17 669	2 495		18 622	181	18 802	15 730	138

* *There were no high-volatility commercial real estate exposures during the period. For specialised lending exposures other than high-volatility commercial real estate, there were no exposures to object finance or commodities asset classes in the year under review.*

R million		As at 30 June 2018							
		Other than high-volatility commercial real estate*							
					Exposure amount				
Regulatory categories	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Risk weight	Project finance	Income-producing real estate	Total	RWA	Expected losses
Strong	Less than 2.5 years	–	–	50%	–	–	–	–	–
	Equal to or more than 2.5 years	9 103	1 408	70%	9 834	–	9 834	7 540	44
Good	Less than 2.5 years	–	–	70%	–	–	–	–	–
	Equal to or more than 2.5 years	5 267	1 269	90%	6 002	–	6 002	5 726	48
Satisfactory		1 522	109	115%	1 515	116	1 631	1 854	36
Weak		1 396	140	250%	1 477	–	1 477	3 913	118
Total		17 288	2 926		18 828	116	18 944	19 033	246

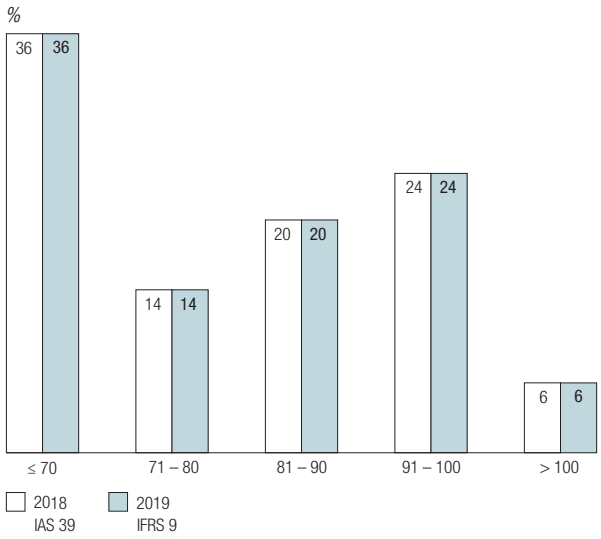
* *There were no high-volatility commercial real estate exposures during the period. For specialised lending exposures other than high-volatility commercial real estate, there were no exposures to object finance or commodities asset classes in 2018.*

RISK ANALYSIS

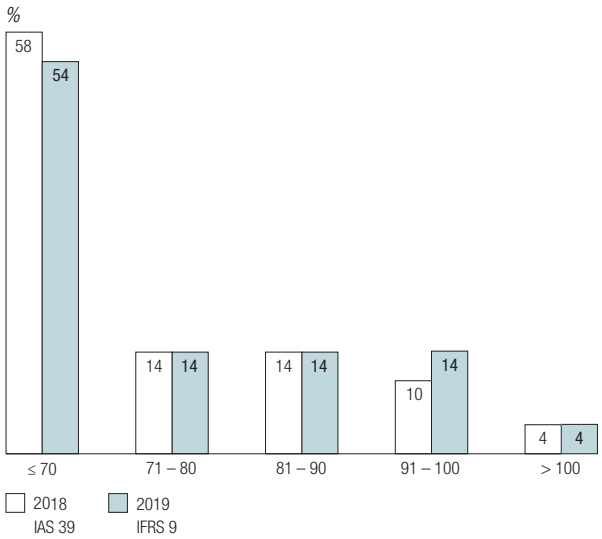
The graphs below provide loan balance-to-value ratios and age distributions of residential mortgages.

Loan-to-value ratios for new business are an important consideration in the credit origination process. The group, however, places more emphasis on counterparty creditworthiness as opposed to relying only on the underlying security.

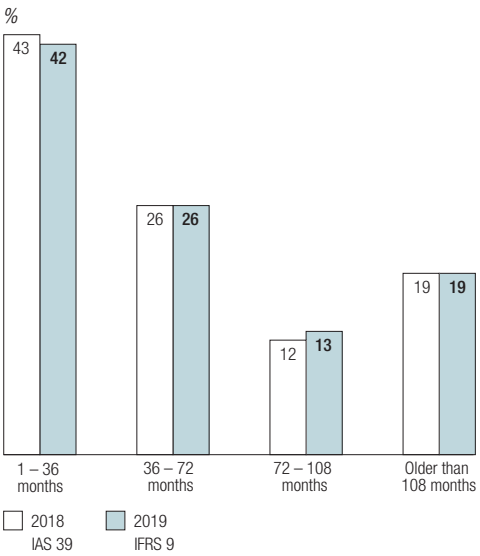
FNB RESIDENTIAL MORTGAGES
BALANCE-TO-ORIGINAL VALUE



FNB RESIDENTIAL MORTGAGES
BALANCE-TO-MARKET VALUE

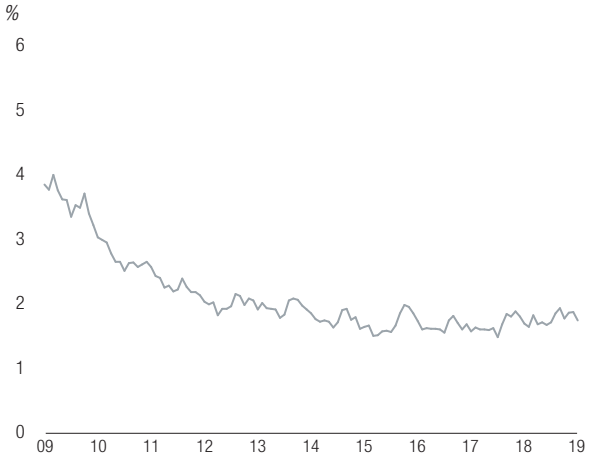


FNB RESIDENTIAL MORTGAGES
AGE DISTRIBUTION



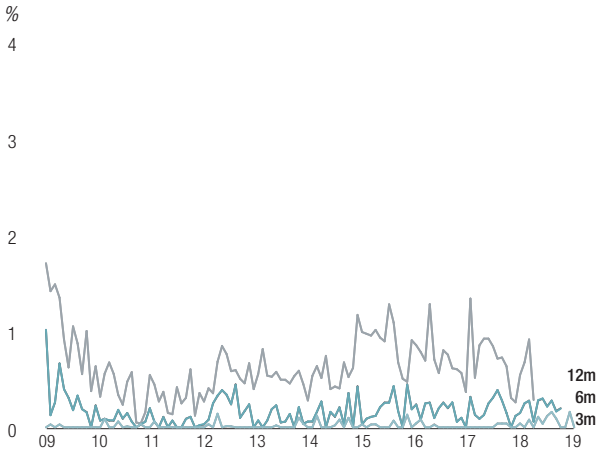
The following graph shows arrears in the FNB HomeLoans portfolio. It includes accounts where more than one full payment is in arrears, expressed as a percentage of total advances. Collections performance has been strong in the portfolio.

FNB HOMELOANS ARREARS



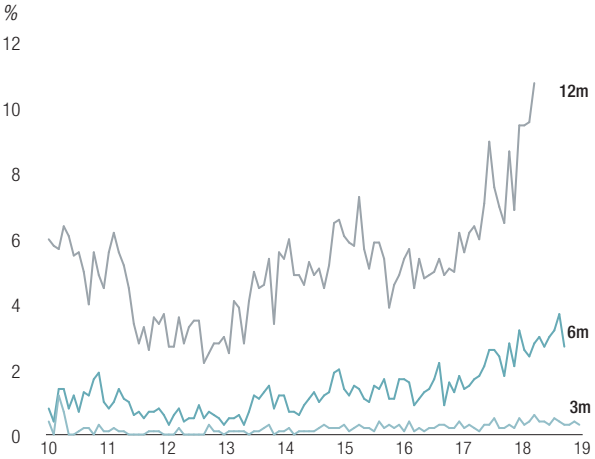
Vintages in FNB HomeLoans remained stable as collections were stronger. Lower new business volumes constrained book growth.

FNB HOMELOANS VINTAGE ANALYSIS



FNB card growth has differed across consumer and premium segments over the year. The growth in premium has stemmed from continued customer migration and a focused strategy, while consumer declined. The performance of both segments has been under pressure recently, evidenced by the six- and 12-month vintages. The portfolio experienced a more challenging collections environment and together with an overall increase in customer financial strain has exerted external pressure on recent business. Risk cuts and other mitigating actions have been implemented to ensure a steady recovery in book performance.

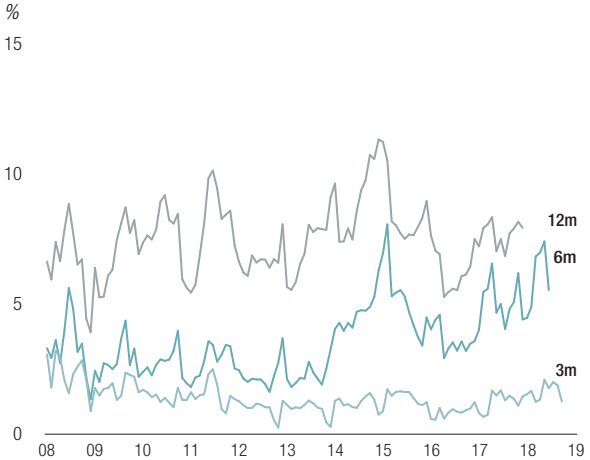
FNB CARD VINTAGE ANALYSIS



Note: The above vintage has been restated to reflect a retail card analysis. Discovery, commercial and rest of Africa have been excluded from the data above.

FNB personal loans growth continued to be driven by increased penetration into the main-banked base. The 12-month vintage remains stable. The risk profile of cohorts since mid-2017 has remained stable. The six-month vintage increased towards year end, primarily due to seasonality and some changes to credit underwriting strategies. However, this performance is within internal thresholds and the increase was expected due to origination strategy changes implemented during late 2018.

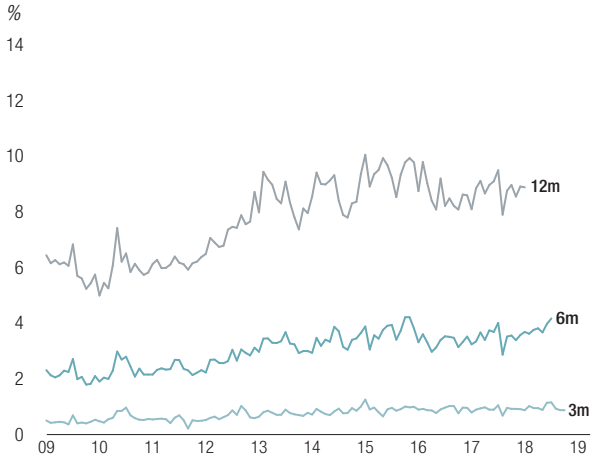
FNB PERSONAL LOANS VINTAGE ANALYSIS



Note: Personal loans vintage have been restated to normalise for "take a break" (in January customers do not need to make a payment). The vintage points were therefore restated to accommodate fewer payments due when the period includes a "take a break" month.

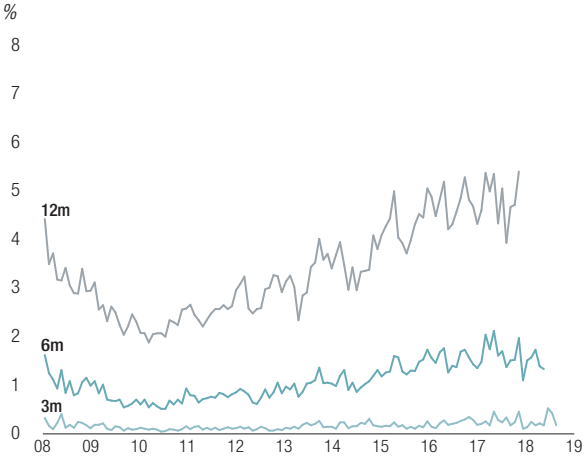
DirectAxis loans' vintages have remained stable on a TTC basis since December 2013 while the business continued to see positive growth in disbursements. This is due to active credit origination management within the portfolio.

DIRECTAXIS LOANS VINTAGE ANALYSIS

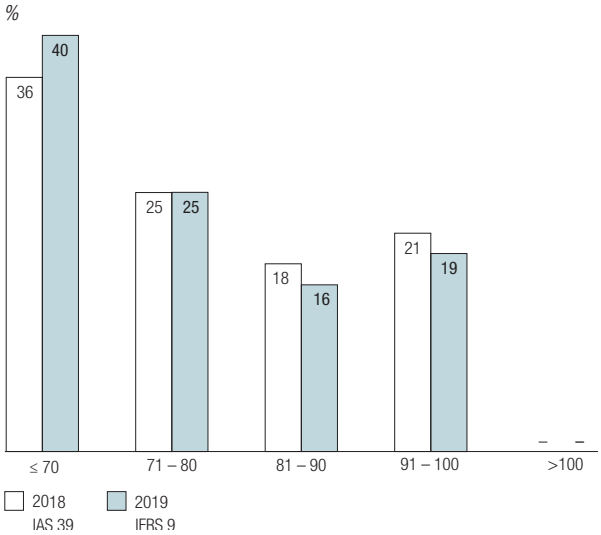


The retail SA VAF six-month vintages have been showing signs of improvement since the beginning of 2018, due to risk appetite tightening to mitigate challenging and uncertain macroeconomic conditions. The increasing trend in the 12-month vintages has stabilised and is expected to follow the reduction experienced in the six-month vintages.

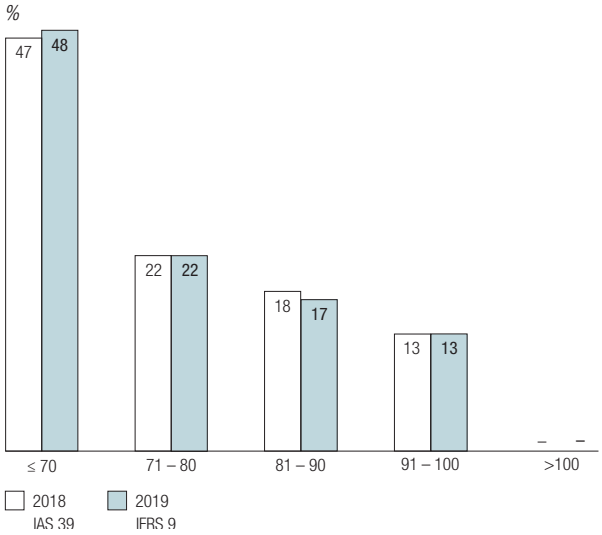
WESBANK RETAIL VAF VINTAGE ANALYSIS



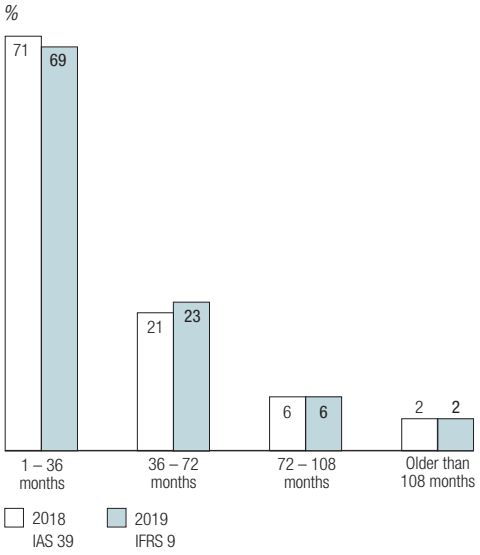
ALDERMORE RESIDENTIAL MORTGAGES
BALANCE-TO-ORIGINAL VALUE



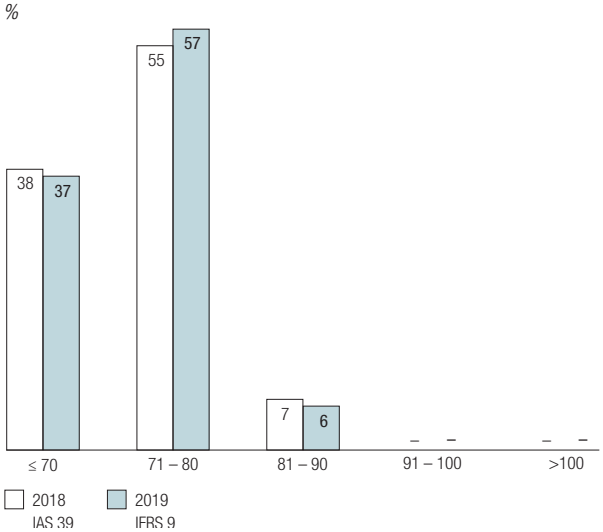
ALDERMORE RESIDENTIAL MORTGAGES
CURRENT BALANCE-TO-MARKET VALUE



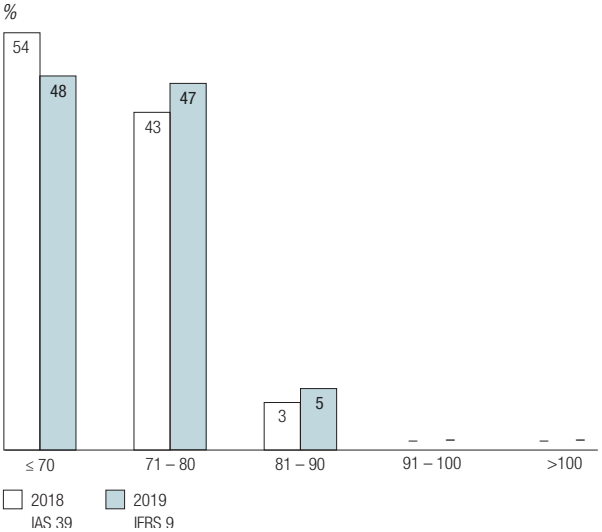
ALDERMORE RESIDENTIAL MORTGAGES
AGE DISTRIBUTION



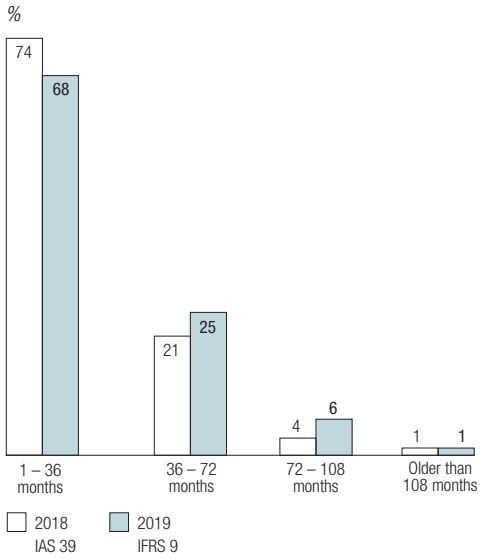
ALDERMORE BUY-TO-LET
BALANCE-TO-ORIGINAL VALUE



ALDERMORE BUY-TO-LET
CURRENT BALANCE-TO-MARKET VALUE

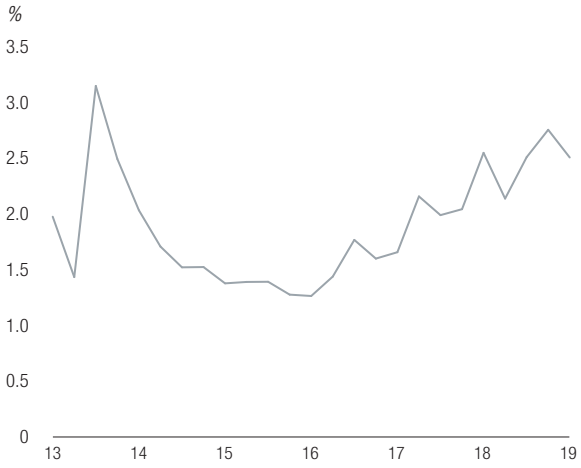


ALDERMORE BUY-TO-LET
AGE DISTRIBUTION



The following graph shows arrears in the Aldermore residential loans portfolio. Arrears levels increased in December 2013 as a relatively small mortgage portfolio was acquired by Aldermore, adding some short-term volatility. Arrears levels initially reduced as the portfolio grew rapidly, but the gradual increase during 2017 to 2019 largely reflects the maturing of the book and a slowdown in growth. Arrears levels are in line with industry benchmarking figures.

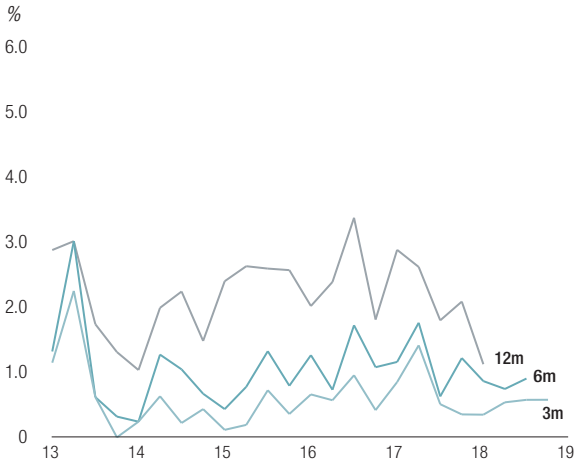
ALDERMORE RESIDENTIAL MORTGAGES ARREARS



For standard residential mortgages Aldermore typically operates in a higher LTV range than the larger high street banks, but uses experienced manual underwriting to identify low-to-medium risk lending opportunities within that range.

Relatively low volumes of arrears cause a degree of volatility in the vintages. The performance of business written has improved significantly since 2013, and credit quality has been steady for cohorts since 2016.

ALDERMORE RESIDENTIAL MORTGAGES VINTAGE ANALYSIS

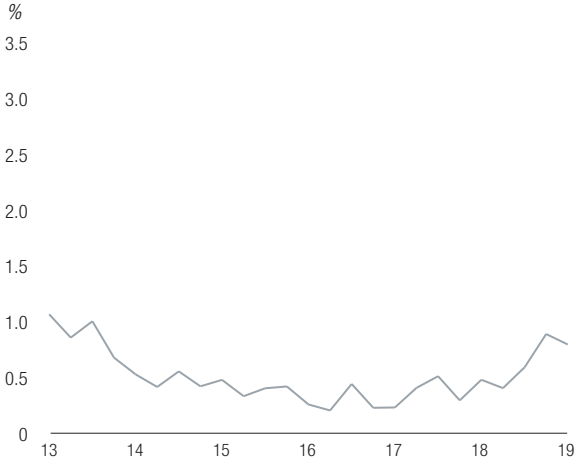


The buy-to-let mortgage business services the needs of a wide range of customers, from first-time to experienced landlords.

The graph below shows that arrears levels have been relatively stable since 2014.

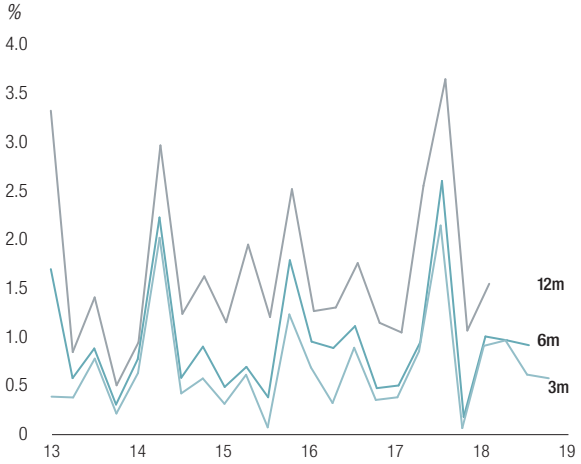
With the deployment of the new buy-to-let underwriting standards in January 2017 (for affordability) and September 2017 (for portfolio landlords) an increased level of conservatism has been applied to affordability assessments for this portfolio.

ALDERMORE BUY-TO-LET ARREARS



The following graph demonstrates that the relatively low volumes of arrears with diverse loan values for this portfolio result in some volatility in the vintages. Credit quality is strong and relatively stable.

ALDERMORE BUY-TO-LET VINTAGE ANALYSIS



Counterparty credit risk

INTRODUCTION AND OBJECTIVES

Counterparty credit risk is the risk of a counterparty to a contract, transaction or agreement defaulting prior to the final settlement of the transaction's cash flows.

Counterparty credit risk measures a counterparty's ability to satisfy its obligations under a contract that has positive economic value to the group at any point during the life of the contract. It differs from normal credit risk in that the economic value of the transaction is uncertain and dependent on market factors that are typically not under the control of the group or the client.

Counterparty credit risk is a risk taken mainly in the group's trading and securities financing businesses. The objective of counterparty credit risk management is to ensure that this risk is appropriately measured, analysed and reported on, and is only taken within specified limits in line with the group's risk/return framework as mandated by the board.

YEAR UNDER REVIEW AND FOCUS AREAS

YEAR UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
→ Enhanced governance around the group's internal counterparty credit risk exposure assessment methodology and the reporting tools for internal derivative credit portfolio reporting. → Performed quarterly impact assessments on the BCBS's proposed Basel III post-crisis regulatory reforms and communicated results to the PA. → Completed the regulatory impact assessment for implementation of the SA-CCR. → Prepared initial assessment of the group's readiness to comply with BCBS 239 from a counterparty credit risk perspective. → Infrastructure was built to aid in the implementation of the Basel margin requirements for non-centrally cleared derivatives. → The economic capital model for counterparty credit risk was built.	→ Finalise implementation of the SA-CCR. The proposed implementation date for the amended regulations was 1 October 2019, however, this has been delayed until further notice is provided by the PA. → Ongoing focus on preparing for the implementation of Basel margin requirements for non-centrally cleared derivatives, expected to go live on 1 September 2020. → Validate the economic capital model for counterparty credit risk exposure and prepare for full parallel reporting with the regulatory methodology. → Focus on full implementation of BCBS 239 requirements and embed compliance.

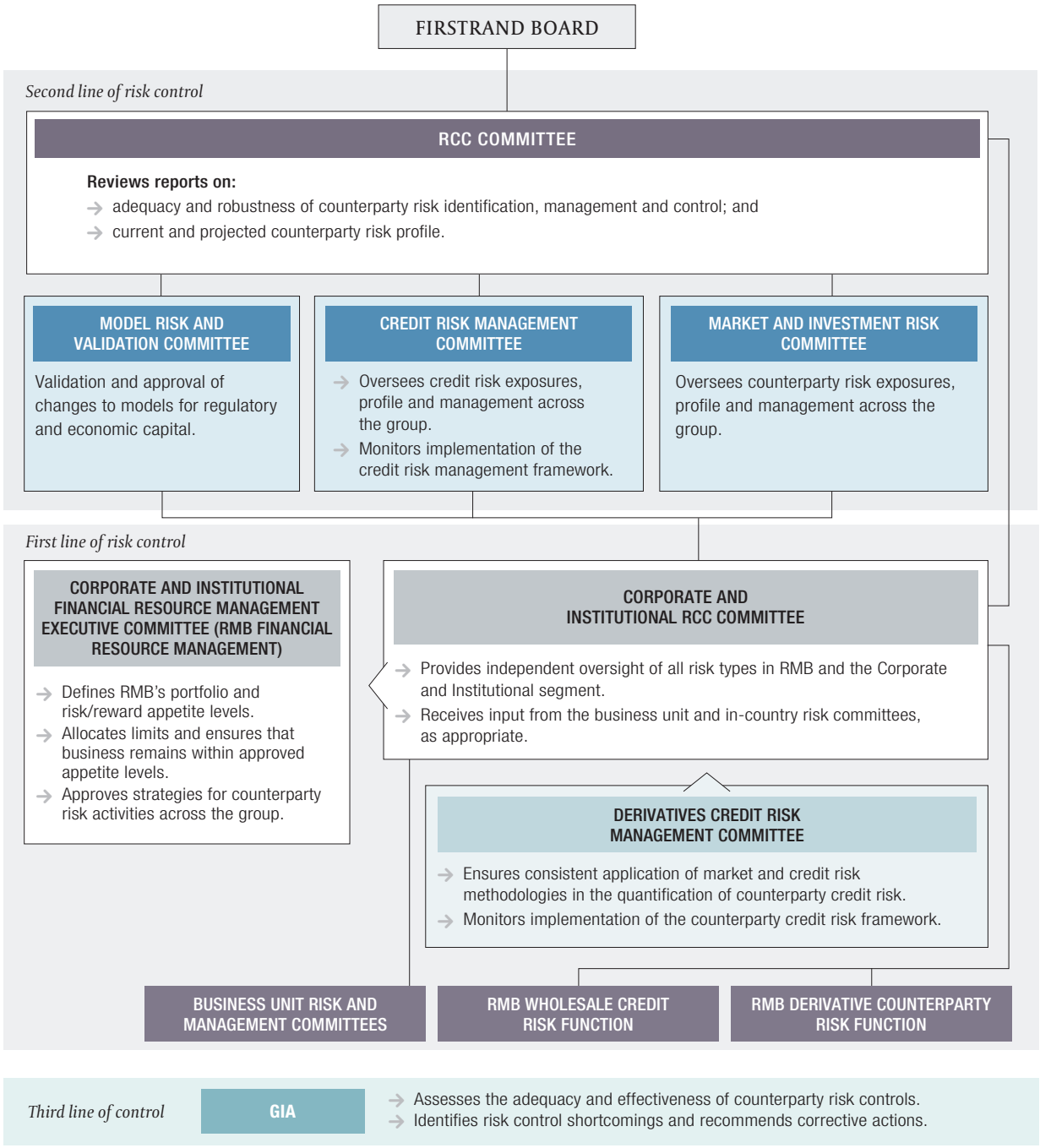
ORGANISATIONAL STRUCTURE AND GOVERNANCE

The wholesale credit function in RMB is responsible for the overall management of counterparty credit risk. It is supported by RMB's derivative counterparty risk department, which is responsible for ensuring that market and credit risk methodologies are consistently applied in the quantification of risk.

Counterparty credit risk is managed on the basis of the principles, approaches, policies and processes set out in the credit risk management framework for wholesale credit exposures. In this respect, counterparty credit risk governance aligns closely with the group's credit risk governance framework, with mandates and responsibilities cascading from the board through the Corporate and Institutional RCC committee to the respective credit committees and subcommittees, as well as deployed and central risk management functions.

The derivative counterparty risk committee supports the credit risk management committee and its subcommittees with analysis and quantification of counterparty credit risk for traded product exposures.

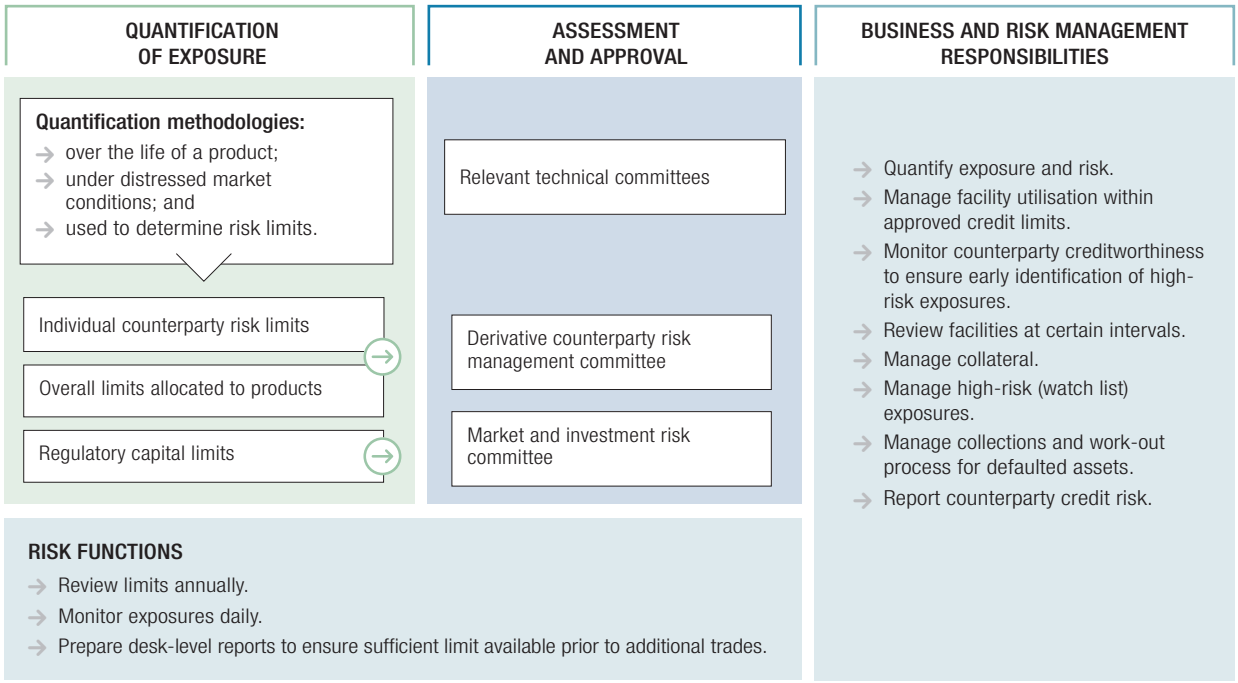
COUNTERPARTY CREDIT RISK GOVERNANCE STRUCTURE



ASSESSMENT AND MANAGEMENT

Measurement of counterparty credit risk aligns closely with credit risk measurement practices and is focused on establishing appropriate limits at a counterparty level and ongoing portfolio risk management. The quantification of risk exposure is described in the following diagram.

QUANTIFICATION OF COUNTERPARTY CREDIT RISK EXPOSURE



The ETL method is applied internally to estimate counterparty credit risk exposure at counterparty and/or portfolio level. These exposures are monitored daily against limits. Excesses and covenant breaches are managed in accordance with the excess approval and escalation mandates.

Counterparty credit risk mitigation

The group's counterparty credit risk mitigation approach is described on page 23.

Wrong-way risk exposure

Wrong-way risk exposure occurs when exposure to a counterparty is adversely correlated with the credit quality of that counterparty. The methods applied in managing counterparty credit limits, exposures and collateral create visibility on portfolio concentrations and exposures, which may be a source of wrong-way risk. These areas are monitored and managed within the relevant exposure mandates.

Credit valuation adjustment (CVA)

CVA is an adjustment to the fair value (or price) of derivative instruments to account for counterparty credit risk. Thus, CVA is commonly viewed as the price of counterparty credit risk. This price depends on counterparty credit spreads as well as on the market risk factors that drive derivatives' value and, therefore, exposure.

The current CVA framework is being revised by the BCBS with the intention to implement the new CVA standards by January 2022. The rationale for revising the current framework is as follows:

- capturing all CVA risks and better recognition of CVA hedges;
- alignment with industry practices for accounting purposes; and
- alignment with proposed revisions of the market risk framework.

Collateral to be provided in the event of a credit rating downgrade

In rare instances, FirstRand has signed ISDA agreements where either parties would be required to post additional collateral in the event of a credit rating downgrade. The additional collateral to be provided by the group in the event of a credit rating downgrade is not material and would not adversely impact its financial position. The group is phasing out ISDA agreements with these provisions. The number of trades with counterparties with these types of agreements (and the associated risk) is also immaterial.

When assessing the portfolio in aggregate, the collateral that the group would need to provide in the event of a rating downgrade is subject to many factors, including market moves in the underlying traded instruments and netting of existing positions.

COUNTERPARTY CREDIT EXPOSURE

The *CCR1: Analysis of counterparty credit risk* table on the following page provides an overview of the counterparty credit risk arising from the group's derivative and structured finance transactions. SA-CCR has not been implemented yet. The information provided in row 1 therefore corresponds to the requirements of the standardised method as applied by FRB SA. The group calculates counterparty credit risk exposures under the standardised method for FRB SA and uses the current exposure method for the other group entities. EAD under the standardised method is quantified by scaling either the current credit exposure less collateral or the net potential future exposure by a factor of 1.4 (alpha).

The comprehensive approach for credit risk mitigation is used to calculate the exposure for collateralised transactions other than collateralised OTC derivative transactions that are subject to the current exposure method. This approach is typically applied to securities financing and repo type of transactions.

The table below provides an explanation of the approaches used in the *CCR1: Analysis of counterparty credit risk* table on the next page.

Replacement cost	The replacement cost for trades that are not subject to margining requirements is the loss that would occur if a counterparty were to default and was immediately closed out of its transactions. For margined trades, the replacement cost is the loss that would occur if a counterparty were to default at present or at a future date, assuming that the close-out and replacement of transactions occur simultaneously. Under the current exposure method, the current replacement cost is determined by marking contracts to market, thus capturing the current exposure without any need for estimation.
Potential future exposure	The potential increase in the exposure between the present and the end of the margin period of risk. An add-on factor is applied to the replacement cost to determine the potential future exposure over the remaining life of the contract.
Effective expected positive exposure (EEPE)	The weighted average of the effective expected exposure over the first year, or, if all the contracts in the netting set mature before one year, over the time period of the longest-maturity contract in the netting set, where the weights represent the proportion of an individual expected exposure over the entire time interval.
EAD post-CRM	Refers to the amount relevant to the calculated capital requirement over applying credit risk mitigation techniques, credit valuation adjustments and specific wrong-way adjustments.

CCR1 provides a comprehensive view of the methods used to calculate counterparty credit risk regulatory requirements and the main parameters used within each method. The exposures reported exclude CVA charges and exposures cleared through central clearing counterparties (CCP).

CCR1: ANALYSIS OF COUNTERPARTY CREDIT RISK BY APPROACH FOR FRB SA

	As at 30 June 2019					
R million	**Replacement cost**	**Potential future exposure**	**EEPE**	**Alpha used for computing regulatory EAD**	**EAD post-CRM**	**RWA**
1. Standardised approach (for derivatives)*	**4 226**	**10 083**		**1.4**	**20 033**	**5 790**
4. Comprehensive approach for credit risk mitigation for security financing transactions**					**4 132**	**1 876**
6. **Total**	**4 226**	**10 083**			**24 165**	**7 666**

* *EEPE is not calculated under the SA-CCR (for derivatives).*

** *Replacement cost, potential future exposure, EEPE and alpha used for computing regulatory EAD are not calculated under the comprehensive approach for credit mitigation for security financing transactions.*

	As at 30 June 2018					
R million	Replacement cost	Potential future exposure	EEPE	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
1. Standardised approach (for derivatives)*	6 343	6 058		1.4	17 361	5 879
4. Comprehensive approach for credit risk mitigation for security financing transactions**					4 011	1 850
6. **Total**	6 343	6 058			21 372	7 729

* *EEPE is not calculated under the SA-CCR (for derivatives).*

** *Replacement cost, potential future exposure, EEPE and alpha used for computing regulatory EAD are not calculated under the comprehensive approach for credit mitigation for security financing transactions.*

The changes in counterparty exposure numbers year-on-year are attributable to factors which include changes in market prices, an increase in trade volumes, and expiry of trades and hedges. Counterparty credit risk portfolio exposures increased year-on-year as a result of increased trading volumes, mainly in foreign exchange, interest rate and commodity derivatives for securities entities. The overall reduction in RWA was mainly attributable to matured foreign exchange and interest rate swap transactions with international banks and corporates. Replacement cost, potential future exposure and alpha used for computing regulatory EAD, EAD post-CRM and RWA are not inputs into the VaR model calculation for security financing transactions. Row 5 of CCR1 is, therefore, excluded from these tables.

The following table provides the EAD post-CRM and RWA amounts for portfolios subject to the standardised CVA capital charge. As the group does not apply the advanced approach for CVA charge, rows 1 and 2 are excluded from CCR2. The increase in CVA RWA was mainly driven by a combination of increased exposure in interest rate swaps, contracts for difference and entities that had credit rating changes.

CCR2: CVA CAPITAL CHARGE

	As at 30 June 2019		As at 30 June 2018	
R million	**EAD post-CRM**	**RWA***	EAD post-CRM	RWA*
3. All portfolios subject to the standardised CVA capital charge	**21 756**	**8 254**	17 361	6 734
4. **Total subject to the CVA capital charge**	**21 756**	**8 254**	17 361	6 734

* *CVA RWA include rest of Africa, and foreign branches and subsidiaries.*

CCR3: STANDARDISED APPROACH – EXPOSURES BY REGULATORY PORTFOLIO AND RISK WEIGHTS*

	As at 30 June 2019					
	Risk weight**					
R million	**0%**	**20%**	**50%**	**100%**	**150%**	**Total credit exposure**
Asset classes#						
Sovereigns	**–**	**–**	**–**	**383**	**16**	**399**
Banks	**–**	**1**	**34**	**–**	**–**	**35**
Securities firms	**–**	**–**	**–**	**–**	**–**	**–**
Corporates	**–**	**–**	**20**	**101**	**6**	**126**
Total	**–**	**1**	**54**	**484**	**22**	**560**

* *These exposures are for the subsidiaries in the rest of Africa and foreign branches.*

** *There were no exposures in the 10%, 35% and 75% risk weight buckets at 30 June 2019.*

There were no exposures in the non-central government public sector entities, multilateral development banks, securities firms, regulatory retail portfolios and other asset classes at 30 June 2019.

	As at 30 June 2018					
	Risk weight**					
R million	0%	20%	50%	100%	150%	Total credit exposure
Asset classes#						
Sovereigns	–	–	–	350	–	350
Banks	–	2	36	1	1	40
Securities firms	–	–	3	–	–	3
Corporates	–	–	5	157	–	162
Total	–	2	44	508	1	555

* *These exposures are for the subsidiaries in the rest of Africa and foreign branches.*

** *There were no exposures in the 10%, 35% and 75% risk weight buckets at 30 June 2018.*

There were no exposures in the non-central government public sector entities, multilateral development banks, regulatory retail portfolios and other asset classes at 30 June 2018. The exposures in the bank and securities firms asset classes in the 0% risk weight category for 2018 were restated due to a calculation refinement.

The following tables provide the counterparty credit risk exposures per portfolio and PD range where the AIRB approach is used for credit risk. They also include the main parameters used in the calculation of RWA. These exposures are for FRB SA, where AIRB for credit risk is applied.

The information provided in the different columns is explained as follows:

- EAD post-CRM, gross of accounting provisions;
- average PD is the obligor-grade PD weighted by EAD;
- average LGD is the obligor-grade LGD weighted EAD;
- average maturity in years is obligor maturity weighted by EAD; and
- RWA density is total risk weighted assets to EAD post-CRM.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE

	Total FRB SA						
	As at 30 June 2019						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**4 146**	**0.08**	**38**	**21.71**	**1.20**	**478**	**11.53**
0.15 to <0.25	**2 201**	**0.17**	**100**	**13.73**	**0.64**	**278**	**12.63**
0.25 to <0.50	**7 074**	**0.39**	**210**	**23.78**	**1.89**	**2 233**	**31.57**
0.50 to <0.75	**653**	**0.70**	**74**	**24.45**	**5.02**	**325**	**49.77**
0.75 to <2.50	**3 808**	**1.59**	**282**	**24.19**	**1.45**	**2 227**	**58.48**
2.50 to <10.00	**375**	**6.94**	**65**	**19.68**	**4.62**	**345**	**92.00**
10.00 to <100.00	**52**	**18.15**	**32**	**13.71**	**0.77**	**27**	**51.92**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Total	**18 309**		**801**			**5 913**	**32.29**

	Total FRB SA						
	As at 30 June 2018						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	3 563	0.07	43	22.00	1.24	408	11.45
0.15 to <0.25	4 400	0.16	103	27.00	0.97	964	21.91
0.25 to <0.50	4 695	0.36	150	35.00	1.83	1 946	41.43
0.50 to <0.75	682	0.74	81	26.00	0.89	305	44.79
0.75 to <2.50	3 457	1.65	221	20.00	1.37	1 819	52.54
2.50 to <10.00	496	4.34	68	21.00	1.03	322	64.92
10.00 to <100.00	68	15.42	22	36.00	1.10	115	169.12
100.00 (default)	–	–	–	–	–	–	–
Total	17 361		688			5 879	33.86

The increase in exposure and RWA in the 0.25 to <0.50 PD band was due to increased trade volumes mainly in foreign exchange, interest rate and commodity derivatives.

The FRB SA movements were mainly driven by movements in securities and corporates (refer to the subsections of CCR 4 tables on pages 135 to 136).

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Banks						
	As at 30 June 2019						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**2 322**	**0.07**	**32**	**19.23**	**1.40**	**236**	**10.16**
0.15 to <0.25	**87**	**0.17**	**6**	**42.34**	**2.64**	**48**	**55.17**
0.25 to <0.50	**768**	**0.41**	**13**	**27.59**	**1.54**	**323**	**42.06**
0.50 to <0.75	**14**	**0.74**	**1**	**31.00**	**4.84**	**12**	**85.71**
0.75 to <2.50	**33**	**1.20**	**4**	**37.97**	**1.28**	**29**	**87.88**
2.50 to <10.00	**3**	**4.93**	**6**	**45.78**	**1.00**	**3**	**100.00**
10.00 to <100.00	**3**	**30.97**	**7**	**45.07**	**1.00**	**9**	**300.00**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**3 230**		**69**			**660**	**20.43**

	Banks						
	As at 30 June 2018						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	3 391	0.07	35	21.00	1.21	377	11.12
0.15 to <0.25	1 423	0.16	3	40.00	0.31	472	33.17
0.25 to <0.50	630	0.45	18	30.00	1.70	317	50.32
0.50 to <0.75	1	0.74	1	26.00	0.89	–	44.79
0.75 to <2.50	14	1.33	4	35.00	1.11	11	78.57
2.50 to <10.00	3	4.93	8	50.00	0.58	5	166.67
10.00 to <100.00	–	32.21	4	45.00	0.30	1	29.52
100.00 (default)	–	–	–	–	–	–	–
Subtotal	5 462		73			1 183	21.66

The overall reduction in exposure and RWA was driven by foreign exchange and interest rate derivatives that matured on positions with international banks as reflected in the 0.00 to <0.15 and 0.15 to <0.25 PD bands.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Securities						
	As at 30 June 2019						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**1 750**	**0.09**	**4**	**24.09**	**0.91**	**228**	**13.03**
0.15 to <0.25	**1 793**	**0.17**	**73**	**12.47**	**0.58**	**201**	**11.21**
0.25 to <0.50	**4 189**	**0.38**	**51**	**21.99**	**1.15**	**995**	**23.75**
0.50 to <0.75	**148**	**0.73**	**22**	**12.10**	**0.39**	**31**	**20.95**
0.75 to <2.50	**2 823**	**1.50**	**140**	**21.04**	**0.95**	**1 386**	**49.10**
2.50 to <10.00	**58**	**4.93**	**14**	**12.98**	**7.98**	**34**	**58.62**
10.00 to <100.00	**15**	**10.07**	**9**	**10.80**	**1.66**	**8**	**53.33**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**10 776**		**313**			**2 883**	**26.75**

	Securities						
	As at 30 June 2018						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	116	0.09	2	23	2.04	21	18.10
0.15 to <0.25	2 514	0.17	56	20	1.22	402	15.99
0.25 to <0.50	2 972	0.34	36	36	1.68	1 119	37.65
0.50 to <0.75	368	0.74	26	16	0.41	100	27.17
0.75 to <2.50	2 575	1.45	104	15	1.04	980	38.06
2.50 to <10.00	167	4.93	15	8	2.68	55	32.93
10.00 to <100.00	54	10.07	11	34	1.39	79	146.30
100.00 (default)	–	–	–	–	–	–	–
Subtotal	8 766		250			2 756	31.44

The increase in exposure and RWA in the 0.00 to <0.15 PD band was mainly driven by a combination of increased commodity futures transactions and entities that had credit ratings upgraded during the year.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Corporate						
	As at 30 June 2019						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**65**	**0.08**	**1**	**45.00**	**1.00**	**12**	**18.46**
0.15 to <0.25	**292**	**0.17**	**16**	**13.12**	**0.46**	**26**	**8.90**
0.25 to <0.50	**1 045**	**0.38**	**113**	**25.86**	**2.34**	**377**	**36.08**
0.50 to <0.75	**204**	**0.74**	**42**	**26.34**	**1.89**	**88**	**43.14**
0.75 to <2.50	**467**	**1.68**	**121**	**35.47**	**1.18**	**343**	**73.45**
2.50 to <10.00	**16**	**4.24**	**38**	**48.67**	**1.06**	**23**	**143.75**
10.00 to <100.00	**34**	**20.32**	**16**	**11.82**	**0.37**	**10**	**29.41**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**2 123**		**347**			**879**	**41.40**

	Corporate						
	As at 30 June 2018						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	46	0.07	5	41.00	0.80	7	15.22
0.15 to <0.25	417	0.17	38	29.00	1.56	84	20.14
0.25 to <0.50	628	0.35	76	41.00	2.01	303	48.25
0.50 to <0.75	215	0.74	46	44.00	0.79	149	69.30
0.75 to <2.50	453	2.03	106	40.00	1.32	431	95.14
2.50 to <10.00	321	4.00	36	27.00	0.17	255	79.44
10.00 to <100.00	14	35.08	6	44.00	0.04	35	250.00
100.00 (default)	–	–	–	–	–	–	–
Subtotal	2 094		313			1 264	60.36

The increase in exposure was mainly driven by increased trading activity on commodity derivatives. The reduction in RWA was driven by a combination of matured foreign exchange derivatives and some counterparties taking up netting agreements. The average maturity of the book is below 18 months, reflecting reduced appetite for long-dated transactions from corporate clients.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Public sector and local government						
	As at 30 June 2019						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0.15 to <0.25	**25**	**1.00**	**2**	**2.00**	**0.22**	**1**	**4.00**
0.25 to <0.50	**23**	**10.00**	**5**	**7.00**	**2.12**	**10**	**43.48**
0.50 to <0.75	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0.75 to <2.50	**269**	**252.00**	**2**	**81.00**	**3.37**	**252**	**93.68**
2.50 to <10.00	**–**	**–**	**3**	**–**	**1.00**	**–**	**–**
10.00 to <100.00	**–**	**–**	**–**	**–**	**–**	**–**	**–**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**317**		**12**			**263**	**82.97**

	Public sector and local government						
	As at 30 June 2018						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	–	–	–	–	–	–	–
0.15 to <0.25	1	0.17	1	20.00	3.99	–	33.90
0.25 to <0.50	76	0.47	5	32.00	3.27	43	56.58
0.50 to <0.75	–	–	–	–	–	–	–
0.75 to <2.50	413	2.45	5	30.00	3.50	395	95.64
10.00 to <100.00	–	–	–	–	–	–	–
100.00 (default)	–	–	–	–	–	–	–
Subtotal	490		11			438	89.39

The overall decrease in EAD in the 0.75 to <2.50 PD band is mainly driven by the effects of credit hedges against state-owned entity exposures.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Sovereign						
	As at 30 June 2019						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0.15 to <0.25	**4**	**2.00**	**3**	**2.00**	**2.56**	**2**	**50.00**
0.25 to <0.50	**111**	**83.00**	**4**	**46.00**	**2.33**	**83**	**74.77**
0.50 to <0.75	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0.75 to <2.50	**–**	**–**	**–**	**–**	**–**	**–**	**–**
2.50 to <10.00	**–**	**–**	**–**	**–**	**–**	**–**	**–**
10.00 to <100.00	**–**	**–**	**–**	**–**	**–**	**–**	**–**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**115**		**7**			**85**	**73.91**

	Sovereign						
	As at 30 June 2018						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	–	–	–	–	–	–	–
0.15 to <0.25	1	0.17	3	44.00	0.71	–	38.11
0.25 to <0.50	128	0.33	2	45.00	1.56	102	79.69
0.50 to <0.75	1	0.74	2	45.00	0.44	–	67.77
0.75 to <2.50	–	–	–	–	–	–	–
2.50 to <10.00	–	–	–	–	–	–	–
10.00 to <100.00	–	–	–	–	–	–	–
100.00 (default)	–	–	–	–	–	–	–
Subtotal	130		7			102	78.46

The reduction in exposure and RWA was mainly driven by matured foreign exchange swap and cross-currency transactions and changes in market prices on the back of a weaker rand.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Other						
	As at 30 June 2019						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**9**	**0.08**	**1**	**28.00**	**4.06**	**2**	**22.22**
0.15 to <0.25	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0.25 to <0.50	**938**	**0.39**	**24**	**24.16**	**4.94**	**445**	**47.44**
0.50 to <0.75	**287**	**0.66**	**9**	**29.15**	**9.64**	**194**	**67.60**
0.75 to <2.50	**216**	**1.67**	**15**	**32.58**	**6.19**	**217**	**100.46**
2.50 to <10.00	**298**	**7.50**	**4**	**19.22**	**4.19**	**285**	**95.64**
10.00 to <100.00	**–**	**–**	**–**	**–**	**–**	**–**	**–**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**1 748**		**53**			**1 143**	**65.39**

	Other						
	As at 30 June 2018						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	10	0.08	1	30.00	5.06	3	30.00
0.15 to <0.25	44	0.17	2	16.00	2.24	6	13.64
0.25 to <0.50	261	0.34	13	16.00	3.15	62	23.75
0.50 to <0.75	97	0.74	7	28.00	2.93	56	57.73
0.75 to <2.50	2	1.14	5	45.00	6.69	2	100.00
2.50 to <10.00	5	6.72	6	39.00	1.20	7	140.00
10.00 to <100.00	–	–	–	–	–	–	–
100.00 (default)	–	–	–	–	–	–	–
Subtotal	419		34			136	32.46

The increase in exposure and RWA was due to an increased trading activity in obligors in the 0.25 to 10.00 PD bands.

The following tables provide the composition of collateral for counterparty credit risk exposures per category for collateral used in derivative transactions, split between fair value of collateral received and posted collateral. "Segregated" refers to collateral which is held in a bankruptcy-remote manner and "unsegregated" to collateral not held in a bankruptcy-remote manner. The increase in unsegregated collateral received was due to collateral received on the back of increased trading in foreign exchange, interest rate and equity derivatives.

CCR5: COMPOSITION OF COLLATERAL FOR COUNTERPARTY CREDIT RISK EXPOSURE PER COLLATERAL CATEGORY*

	As at 30 June 2019					
	Collateral used in derivative transactions				Collateral used in security finance transactions	
	Fair value of collateral received		**Fair value of posted collateral**		**Fair value of collateral received**	**Fair value of posted collateral**
R million	**Segregated**	**Unsegregated**	**Segregated**	**Unsegregated**		
Cash – domestic currency	**7 987**	**7 289**	**–**	**20 119**	**–**	**–**
Cash – other currencies	**–**	**2 613**	**–**	**–**	**–**	**–**
Domestic sovereign debt	**–**	**4**	**–**	**–**	**297 239**	**292 136**
Other sovereign debt	**–**	**–**	**–**	**–**	**41**	**41**
Government agency debt	**–**	**–**	**–**	**–**	**4 880**	**4 842**
Corporate bonds	**–**	**–**	**–**	**–**	**1 235**	**1 408**
Other collateral	**–**	**54**	**–**	**–**	**–**	**–**
Total	**7 987**	**9 960**	**–**	**20 119**	**303 395**	**298 427**

	As at 30 June 2018					
	Collateral used in derivative transactions				Collateral used in security finance transactions	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
R million	Segregated	Unsegregated	Segregated	Unsegregated		
Cash – domestic currency	6 588	4 922	–	18 119	–	–
Cash – other currencies	–	2 468	–	–	–	–
Domestic sovereign debt	–	–	–	1 354	310 665	315 376
Other sovereign debt	–	–	–	–	31	31
Government agency debt	–	–	–	3 101	9 878	9 891
Corporate bonds	–	–	–	–	1 796	1 471
Total	6 588	7 390	–	22 574	322 370	326 769

** There were no collateral in the equity securities category during 2018 or 2019, and no other collateral in 2018.*

The group employs credit derivatives primarily for the purposes of protecting its own positions and for hedging its credit portfolio as indicated in the following tables.

CCR6: CREDIT DERIVATIVES

	As at 30 June 2019		As at 30 June 2018	
R million	**Protection bought**	**Protection sold**	Protection bought	Protection sold
Notionals*				
– Single-name credit default swaps	**12 973**	**4 930**	17 208	3 757
Total notionals	**12 973**	**4 930**	17 208	3 757
Fair values	**12**	**(48)**	(779)	846
– Positive fair value (asset)	**378**	**837**	300	938
– Negative fair value (liability)	**(366)**	**(885)**	(1 079)	(92)

** There were no credit derivatives in the index credit default swaps, total return swaps, credit options and other credit derivative categories.*

The template *CCR7: RWA flow statements of CCR exposures under the internal model method* is not applicable as the group does not use the internal model method for measuring EAD of counterparty credit risk EAD.

The group's exposure to central counterparties (central clearing houses) and related RWA is provided below.

CCR8: EXPOSURES TO CENTRAL COUNTERPARTIES

	As at 30 June 2019		As at 30 June 2018	
R million	**EAD post-CRM**	**RWA**	EAD post-CRM	RWA
2. Exposures for trades at qualifying central counterparties (excluding initial margin and default fund contributions) of which:	**5 556**	**111**	11 072	222
3. – OTC derivatives	**659**	**13**	589	12
4. – Exchange-traded derivatives	**4 897**	**98**	10 483	210
5. – Securities financing transactions	**–**	**–**	–	–
6. – Nettings sets where cross-product netting has been approved	**–**	**–**	–	–
7. Segregated initial margin*	**7 987**		6 588	
8. Non-segregated initial margin	**–**	**–**	–	–
9. Pre-funded default fund contributions	**319**	**37**	321	1 393
10. Unfunded default fund contributions	**–**	**–**	–	–
1. **Total exposures to qualifying central counterparties****	**13 862**	**148**	17 981	1 615

** RWA is not determined on segregation initial margin.*

*** There were no exposures to non-qualifying central counterparties (rows 11 – 20 of the CCR8 template).*

Securitisations

INTRODUCTION AND OBJECTIVES

Securitisation is the process whereby illiquid loans and other receivables are packaged, underwritten and sold in the form of asset-backed securities to investors.

Objectives of securitisation activities

Securitisation enables the group to access funding markets at ratings that are typically higher than its own corporate credit rating. This generally provides access to broader funding sources at more favourable rates. The removal of the assets and supporting funding from the balance sheet enables the group to reduce the cost of on-balance sheet financing and to manage potential asset-liability mismatches and credit concentrations.

The group uses securitisation as a tool to achieve one or more of the following objectives:

- improve the group's liquidity position through the diversification of funding sources;
- match the cash flow profile of assets and liabilities;
- reduce balance sheet credit risk exposure; and
- manage credit concentration risk.

Exposures intended to be securitised or resecuritised in the future

FirstRand uses securitisation primarily as a funding tool. The ability to securitise assets depends on the availability of eligible assets, investor appetite for securitisation paper and the availability of alternative funding sources. All assets on the group's balance sheet are considered possible exposures that could be securitised within market constraints. The group obtains both internal and external approval for any proposed transactions.

Resecuritisation

A resecuritisation exposure is a securitisation exposure where the risk associated with an underlying pool of exposures is tranched and at least one of the underlying exposures is itself a securitisation exposure.

The group's asset-backed commercial paper conduits occasionally acquire securitisation paper, which is managed as part of the underlying portfolio. This, however, represents a minimal portion of the total portfolio and is disclosed as a resecuritisation exposure for regulatory capital purposes.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

THE GROUP'S ROLE IN SECURITISATION AND CONDUIT STRUCTURES

Transaction	Originator	Sponsor	Servicer	Investor	Liquidity provider	Credit enhancement provider	Swap counterparty
Own securitisations							
Nitro 5	✓	✓	✓	✓			✓
Nitro 6	✓	✓	✓				✓
Nitro 7	✓	✓	✓				✓
FAST Issuer	✓	✓	✓	✓			✓
Turbo Finance 6	✓	✓	✓	✓			
Turbo Finance 7	✓	✓	✓	✓			
Turbo Finance 8	✓	✓	✓	✓			
MotoPark	✓	✓	✓	✓			
MotoFirst	✓	✓	✓	✓			
MotoHouse	✓	✓	✓	✓			✓
Oak 1	✓	✓	✓	✓			
Oak 2	✓	✓	✓	✓			
Conduit structures							
iNdwa*		✓	✓		✓		✓
iVuzi*		✓	✓		✓	✓	✓
iNkotha**			✓				
iNguza**			✓				
Third party							
Homes Obligor Mortgage Enhanced Securities					✓		
Private Residential Mortgages 2					✓		
Superdrive Investments				✓			
Velocity Finance				✓			✓

* *Conduits incorporated under regulations relating to securitisation scheme.*

** *Conduits incorporated under regulations relating to commercial paper.*

The ultimate responsibility for determining risk appetite and thus risk limits for the group vests in the board. Independent oversight and monitoring is conducted via the RCC committee, which, in turn, has delegated the responsibility for securitisation exposures to group ALCCO. ALCCO also maintains responsibility on behalf of the board for the allocation of sublimits and any remedial action in the event of limit breaches. The FirstRand wholesale credit committee approves credit limits for retained securitisation exposures per special purpose vehicle (SPV).

ASSESSMENT AND MANAGEMENT

Oversight and risk mitigation

The group's role in securitisation transactions, both for group-originated and group-sponsored transactions as well as third-party securitisations, results in various financial and operational risks, including:

- compliance risk;
- credit risk;
- currency risk;
- interest rate risk;
- liquidity and funding risk;
- operational risk; and
- reputational risk.

For securitisations originated by the group, exposures are managed from a credit perspective by the originating business unit as if the securitisation had never occurred. Resultant risks from retained exposures and the overall origination and maintenance of securitisation structures are covered as part of the day-to-day management of the various risk types. This includes risk mitigation and management actions, depending on risk limits and appetite per risk area. Securitisation performance is monitored on an ongoing basis and reported to management and governance forums.

Some governance and management processes in place to monitor securitisation-related risks are outlined below:

- rigorous internal approval processes are in place for proposed securitisations, and transactions are reviewed by ALCCO, the RCC committee and the board against approved limits;
- changes to retained exposures (as a result of ratings changes, reviews, note redemptions and credit losses) are reflected in the monthly BA 500 regulatory return for FRB SA and the quarterly BA 600 for other entities; and
- transaction investor reports, alignment with SPV financial reporting and the impact of underlying asset performance are reflected on the semi-annual BA 501 regulatory return.

The group does not employ credit risk mitigation techniques to hedge credit risk on retained securitisation tranches.

Summary of accounting policies for securitisation activities

From an accounting perspective, traditional securitisations are treated as sales transactions. At inception, the assets are sold to an SPV at carrying value and no gains or losses are recognised. For synthetic securitisations, credit derivatives used in the transaction are recognised at fair value, with any fair value adjustments reported in profit or loss.

Securitisation entities are consolidated into FRIHL, FRI and FRB for financial reporting purposes. Any retained notes are accounted for as investment securities in the banking book. Liabilities resulting from securitisation vehicles are accounted for in line with group accounting policies for liabilities, provisions and contingent liabilities.

Year under review

NITRO 5

The clean-up call for Nitro 5 was exercised in September 2018. The transaction was terminated and the remaining assets reflected as advances on the WesBank balance sheet.

NITRO 7

The Nitro 7 securitisation transaction was succesfully concluded in April 2019. A R2 billion portfolio of WesBank assets was sold to Nitro 7 and R2.06 billion of notes were issued (class A to E notes) to the market. The notes are rated by Moody's. Proceeds of R60 million from class E notes were used to fund the cash reserve for the benefit of the noteholders.

MOTOHOUSE

The MotoHouse securitisation transaction was concluded in July 2015. £294.8 million of MotoNovo vehicle finance loans were purchased from the bank's London Branch and funded through the issuance of class A notes of £280 million and class B notes of £14.8 million. Class C notes of £5.9 million were used to fund the cash reserve. The transaction was structured with a revolving period of 36 months, which expired in July 2018. The vehicle finance loans were sold back to the London Branch on 23 July 2018 and the proceeds from the sale were used to redeem the class A, B and C notes.

External credit assessment institutions (ECAIs)

The group employs eligible ratings issued by nominated ECAIs to risk weight its securitisation and resecuritisation exposures where the use is permitted. The ECAIs nominated by the group for this purpose are Global Credit Ratings (GCR), Moody's, S&P, Fitch and DBRS Ratings Limited (DBRS). The following tables show the traditional securitisations currently in issue and the rating distribution of any exposures retained. Global scale ratings are used for internal risk management purposes and regulatory capital reporting.

TRADITIONAL SECURITISATIONS TRANSACTIONS*

*Traditional securitisations***	Asset type	Rating agency	Year initiated	Expected close
Nitro 5	Retail: auto loans	S&P	2015	2023
Nitro 6	Retail: auto loans	GCR	2018	2025
Nitro 7	Retail: auto loans	Moody's	2019	2027
FAST Issuer	Retail: auto loans		2016	2025
Turbo Finance 6	Retail: auto loans	S&P and Moody's	2016	2023
Turbo Finance 7	Retail: auto loans	S&P and Moody's	2016	2023
Turbo Finance 8	Retail: auto loans	S&P and Moody's	2018	2026
MotoPark	Retail: auto loans	DBRS and S&P	2018	2025
MotoFirst	Retail: auto loans		2017	2026
MotoHouse	Retail: auto loans		2015	2023

		Assets outstanding#		Notes outstanding		Retained exposure	
R million	Assets securitised	**June 2019**	June 2018	**June 2019**	June 2018	**June 2019**	June 2018
Nitro 5	–	**–**	243	**–**	293	**–**	226
Nitro 6	2 000	**1 262**	1 824	**1 213**	1 944	**–**	20
Nitro 7	2 000	**2 091**	–	**2 089**	–	**–**	–
Fast Issuer	8 475	**9 608**	8 476	**9 213**	9 284	**2 092**	2 336
Turbo Finance 6	7 105	**1 256**	2 746	**1 053**	2 885	**296**	714
Turbo Finance 7	10 289	**2 662**	5 282	**2 280**	5 524	**405**	404
Turbo Finance 8	7 195	**5 696**	–	**5 216**	–	**180**	–
MotoPark	9 714	**10 893**	9 558	**9 784**	9 885	**9 813**	9 885
MotoFirst	10 811	**14 436**	10 929	**12 864**	11 221	**846**	881
MotoHouse	–	**–**	5 181	**–**	5 468	**–**	377
Total	57 589	**47 904**	44 239	**43 712**	46 505	**13 632**	14 843

* *Include transactions structured by the group and exclude third-party transactions.*

** *Aldermore's Oak securitisations have not derecognised assets in terms of the securitisation framework and therefore remain on-balance sheet.*

\# *Assets outstanding do not include cash reserves.*

Securitisation exposures in the banking book

The following tables provide a breakdown of the group's traditional securitisation exposures in the banking book for the retail and corporate portfolios where the group acts as originator, sponsor, investor, or originator and sponsor.

SEC1: SECURITISATION EXPOSURE IN THE BANKING BOOK PER PORTFOLIO*

	As at 30 June 2019				
	Traditional securitisations				
R million	**Group acts as originator**	**Group acts as sponsor**	**Group acts as investor**	**Group acts as originator and sponsor**	**Total**
1. **Retail**					
4. Auto loans	**13 633**	**–**	**27 854**	**–**	**41 486**
6. **Corporate**					
7. Loans to corporates	**–**	**–**	**–**	**5 152**	**5 152**
Total	**13 633**	**–**	**27 854**	**5 152**	**46 638**

	As at 30 June 2018				
	Traditional securitisations				
R million	Group acts as originator	Group acts as sponsor	Group acts as investor	Group acts as originator and sponsor	Total
1. **Retail**					
4. Auto loans	14 843	–	23 775	–	38 618
6. **Corporate**					
7. Loans to corporates	–	–	–	4 205	4 205
Total	14 843	–	23 775	4 205	42 823

* *There were no residential mortgage, credit card or resecuritisation exposures in the retail portfolio (rows 2, 3 and 5 of the SEC1 template) and no commercial mortgage, lease and receivables, other corporate or resecuritisation exposures in the corporate portfolio (rows 8 – 11 of the SEC1 template).*

The regulatory approaches for securitisation exposures in the following tables are explained below.

Internal ratings-based (IRB) approach	**Ratings-based approach** Securitisation exposures to notes rated by an ECAI and held in an entity that uses the IRB approach.
	Internal assessment approach (IAA) The group does not use IAA for calculating risk weighted assets on securitisation exposures.
	Supervisory formula approach (SFA) Where SFA is used, these exposures are captured in the IRB SFA column.
Standardised approach	Exposures subject to the look-through approach are disclosed in the simplified supervisory approach (SSFA).
Unrated notes	Exposures to unrated notes are risk weighted at 1 250%.

There were no synthetic securitisations during the year under review.

SEC3: TRADITIONAL SECURITISATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED REGULATORY CAPITAL REQUIREMENTS – BANK ACTING AS ORIGINATOR OR AS SPONSOR

	As at 30 June 2019*									
	Exposure values by risk weighted (RW) bands					Exposure values by regulatory approach				
						IRB		SA		
R million	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1 250% RW	1 250% RW	RBA	SFA	SSFA	1 250%	
Securitisation										
4. Retail	**1 602**	**9 128**	**540**	**177**	**2 186**	**–**	**1 534**	**9 913**	**2 186**	
5. Corporate	**–**	**5 152**	**–**	**–**	**–**	**–**	**–**	**5 152**	**–**	
Total	**1 602**	**14 280**	**540**	**177**	**2 186**	**–**	**1 534**	**15 065**	**2 186**	

** There were no resecuritisations or synthetic securitisations (rows 6 – 15 of the SEC3 template) during the year under review.*

*** Capital requirement calculated at 11.680% of RWA. The minimum requirement excludes the bank-specific requirements, but includes the CCyB requirement. The difference to the BCBS base minimum (8%) relates to the buffer add-ons for Pillar 2A, CCyB and capital conservation as prescribed in the regulations.*

	As at 30 June 2018*								
	Exposure values by RW bands					Exposure values by regulatory approach			
						IRB		SA	
R million	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1 250% RW	1 250% RW	RBA	SFA	SSFA	1 250%
Securitisation									
4. Retail	2 257	9 225	391	334	2 637	–	1 772	10 434	2 637
5. Corporate	–	4 205	–	–	–	–	–	4 205	–
Total	2 257	13 429	391	334	2 637	–	1 772	14 639	2 637

** There were no resecuritisations or synthetic securitisations (rows 6 – 15 of the SEC3 template) in 2018.*

*** Capital requirement calculated at 11.208%. The minimum requirement excludes the bank-specific requirements, but includes the CCyB requirement. The difference to the BCBS base minimum (8%) relates to the buffer add-ons for Pillar 2A, CCyB and capital conservation as prescribed in the regulations.*

As at 30 June 2019*

	RWA by regulatory approach				Minimum capital requirements**			
	IRB		SA		IRB		SA	
	RBA	SFA	SSFA	1 250%	RBA	SFA	SSFA	1 250%
	–	114	5 737	27 327	–	13	670	3 192
	–	–	2 548	–	–	–	298	–
	–	114	8 285	27 327	–	13	968	3 192

As at 30 June 2018*

	RWA by regulatory approach				Minimum capital requirements**			
	IRB		SA		IRB		SA	
	RBA	SFA	SSFA	1 250%	RBA	SFA	SSFA	1 250%
	–	131	6 268	32 961	–	15	702	3 695
	–	–	2 110	–	–	–	236	–
	–	131	8 378	32 961	–	15	938	3 695

SEC4: TRADITIONAL SECURITISATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS – BANK ACTING AS INVESTOR

	As at 30 June 2019*						
	Exposure values by RW bands**	**Exposure values by regulatory approach#**		**RWA by regulatory approach**		**Minimum capital requirements†**	
	≤20%	**IRB**		**IRB**		**IRB**	
R million	**RW**	**RBA**	**SFA**	**RBA**	**SFA**	**RBA**	**SFA**
Securitisation							
4. Retail	**27 854**	**–**	**27 854**	**–**	**2 067**	**–**	**241**
5. Corporate	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Total	**27 854**	**–**	**27 854**	**–**	**2 067**	**–**	**241**

** There were no resecuritisations or synthetic securitisations (rows 6 – 15 of the SEC4 template) during the year under review.*

*** There were no exposures in the >20% to 50%, >50% to 100%, >100% to <1 250% and 1 250% RW bands.*

 # There were no exposures under the standardised approach or unrated notes risk weighted at 1 250%.

† Capital requirement calculated at 11.680%. The minimum requirement excludes the bank-specific requirements, but includes the CCyB requirement. The difference to the BCBS base minimum (8%) relates to the buffer add-ons for Pillar 2A, CCyB and capital conservation as prescribed in the regulations.

	As at 30 June 2018*						
	Exposure values by RW bands**	Exposure values by regulatory approach#		RWA by regulatory approach		Minimum capital requirements†	
	≤20%	IRB		IRB		IRB	
R million	RW	RBA	SFA	RBA	SFA	RBA	SFA
Securitisation							
4. Retail	23 775	101	23 674	64	1 757	8	206
5. Corporate	–	–	–	–	–	–	–
Total	23 775	101	23 674	64	1 757	8	206

** There were no resecuritisations or synthetic securitisations (rows 6 – 15 of the SEC4 template) in 2018.*

*** There were no exposures in the >20% to 50%, >50% to 100%, >100% to <1 250% and 1 250% RW bands.*

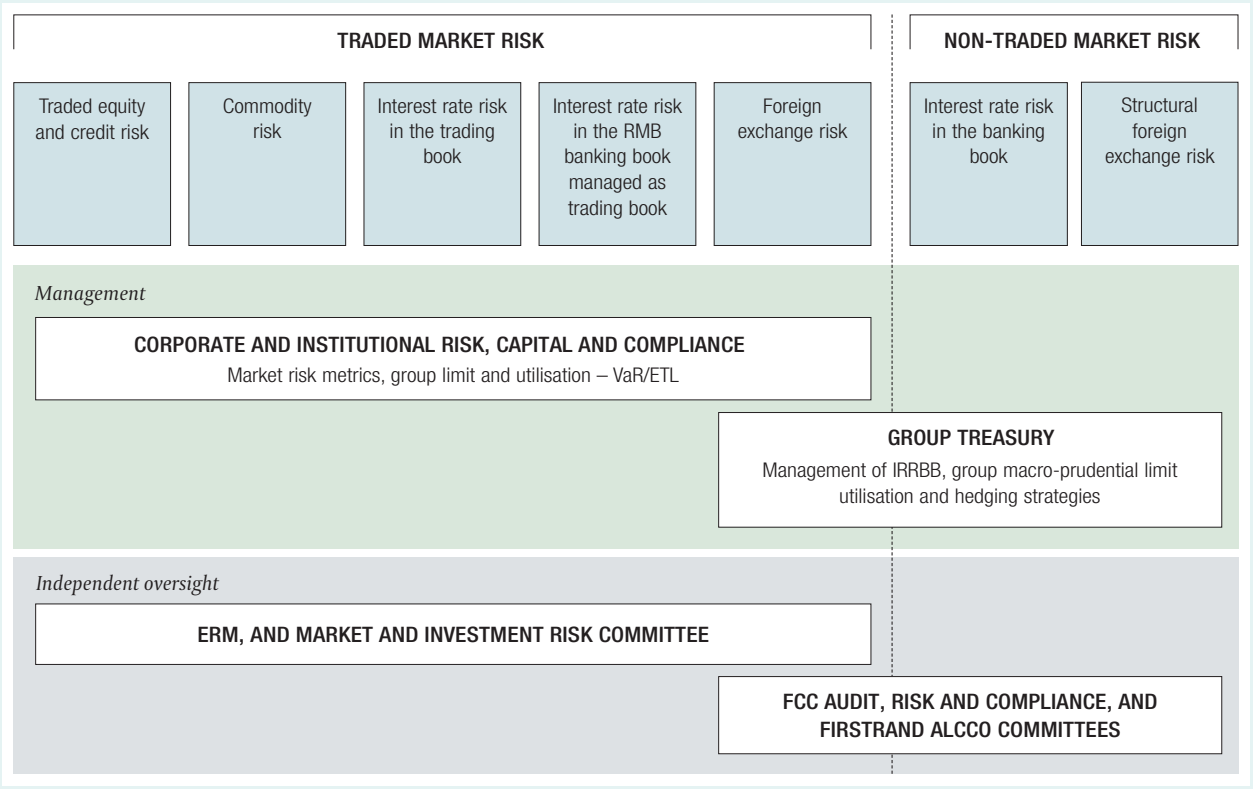
 # There were no exposures under the standardised approach or unrated notes risk weighted at 1 250%.

† Capital requirement calculated at 11.208%. The minimum requirement excludes the bank-specific requirements, but includes the CCyB requirement. The difference to the BCBS base minimum (8%) relates to the buffer add-ons for Pillar 2A, CCyB and capital conservation as prescribed in the regulations.

Market risk

The group distinguishes between **traded market risk** and **non-traded market risk**. The following diagram describes the traded and non-traded market risks and the governance bodies responsible for managing these risks.

TRADED AND NON-TRADED MARKET RISK ELEMENTS



Traded market risk

INTRODUCTION AND OBJECTIVES

Traded market risk activities

Traded market risk is the risk of adverse revaluation of any financial instrument as a consequence of changes in market prices or rates.

The group's market risk in the trading book emanates mainly from the provision of hedging solutions for clients, market-making activities and term-lending products, and is taken and managed by RMB. The relevant business units in RMB function as the centres of expertise for all market risk-related activities. Market risk is managed and contained within the group's appetite.

The group's objective is to manage and control market risk exposures, based on three pillars, each with its own objective:

- strategic business mix – ensure that RMB's current and future strategies, spanning various activities and geographies, achieve their growth and return targets within acceptable levels of risk;
- financial performance – optimise portfolio performance and manage the interplay between growth and ROE given the differentiated risk return characteristics of activities; and
- risk and capital impact – only accept an appropriate level of risk commensurate with performance objectives and market opportunity.

The nature of hedging and risk mitigation strategies performed across the group corresponds to the market risk management instruments available in each operating jurisdiction. These strategies range from the use of traditional market instruments, such as interest rate swaps, to more sophisticated hedging strategies to address a combination of risk factors arising at portfolio level.

The group uses global and industry accepted models and operating platforms to measure market risk. These operating platforms support regulatory reporting, external disclosures and internal management reporting for market risk. The risk infrastructure incorporates the relevant legal entities and business units, and provides the basis for reporting on risk positions, capital adequacy and limit utilisation to the relevant governance and management functions on a regular and *ad-hoc* basis. Established units in risk management functions assume responsibility for measurement, analysis and reporting of risk while promoting sufficient quality and integrity of risk-related data. The VaR and sVaR calculations and aggregations are performed daily by these operating platforms and risk measures are compared to limits. Breaches are escalated to senior management.

Interest rate risk in the banking book activities under the market risk framework

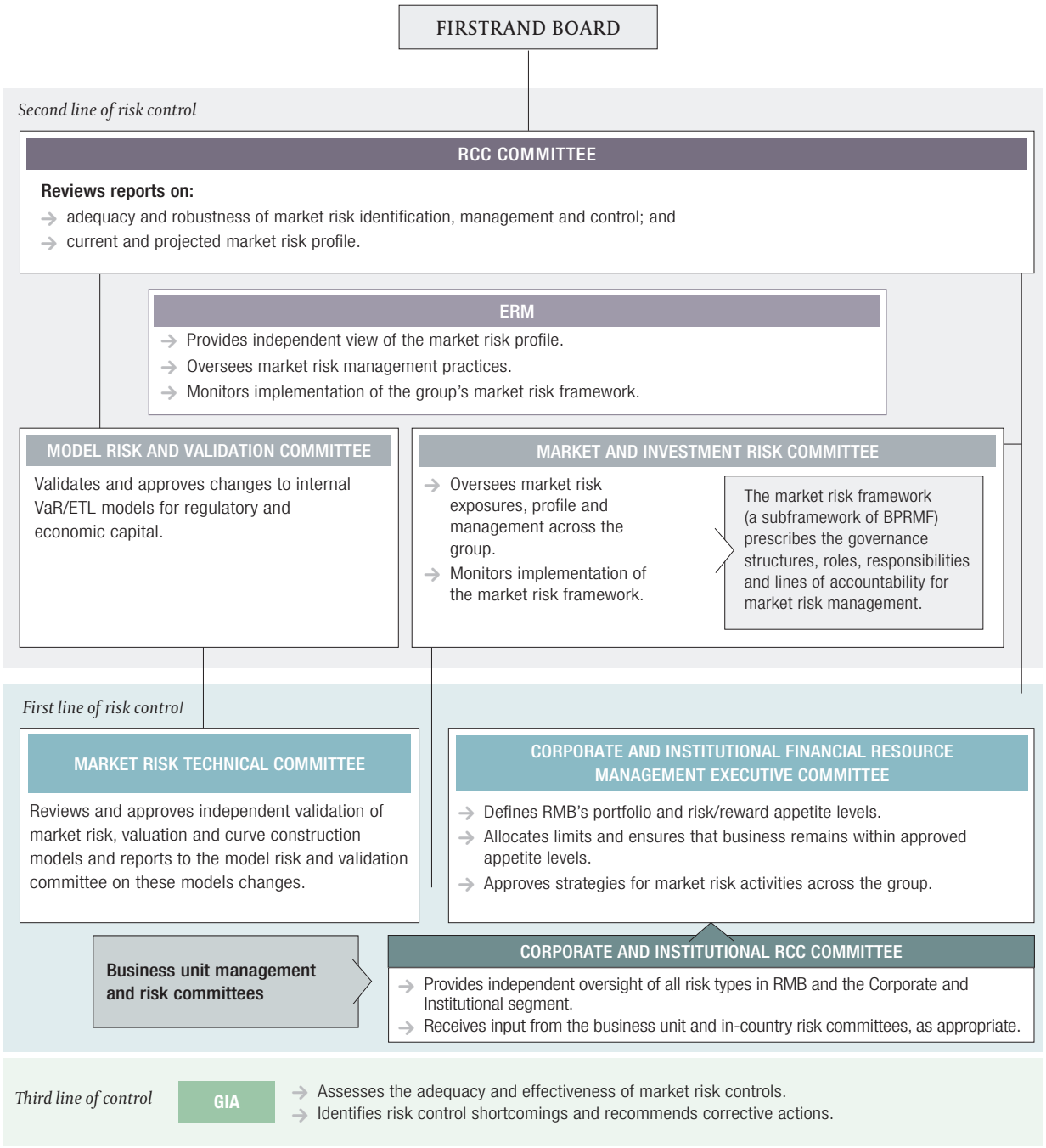
Management and monitoring of interest rate risk in the banking book are split between the RMB banking book and the remaining domestic banking book. RMB manages the majority of its banking book under the market risk framework, with risk measured and monitored in conjunction with the trading book and management oversight provided by the market and investment risk committee. The RMB banking book interest rate risk exposure was R55 million on a 10-day ETL basis at 30 June 2019 (2018: R45 million). Interest rate risk in the remaining domestic banking book is discussed in the *Interest rate risk in the banking book* section.

YEAR UNDER REVIEW AND FOCUS AREAS

YEAR UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
→ Overall diversified levels of market risk increased over the year under review. → There are no significant concentrations in the portfolio. → The group implemented Murex, a trade risk management platform used to trade instruments across global financial markets and manage the risk associated with these trades. → Market risk increased during the year due to a change in the calculation of VaR and sVaR on inflation products on the Murex platform and due to normal business activities.	→ The group is reviewing and adapting the current operating platform for market risk activities, including platform capabilities across both front office and risk management areas, and aligning market risk processes, analyses and reporting in line with changes in regulatory requirements. → The BCBS document, *Fundamental review of the trading book,* remains a priority of FirstRand and it continues to work with both the regulators and the banking industry as a whole to understand, draft and implement these regulations. → Continue to implement requirements of BCBS 239 relating to market risk, and embed compliance.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

TRADED MARKET RISK GOVERNANCE STRUCTURE



Market risk reporting

High-quality risk reporting enables senior management and governance committees to make well-considered decisions to achieve objectives and manage key risks. The group regularly reviews the content of market risk reports to ensure relevance and that reporting adequately and accurately reflects the group's market risk profile. Market risk reporting follows the market risk governance structure on the previous page. The frequency of each report aligns with the timing of governance committee meetings and content is driven by information requirements of the target audience.

Market risk reports are provided to the Corporate and Institutional financial resource management (FRM) executive committee, the Corporate and Institutional RCC committee, and the market and investment risk committee (MIRC) on a quarterly basis. Daily and monthly reports on market risk movements, risk factors and limit utilisation are provided to senior management and executive committees, as appropriate. Information in market risk reports includes, but is not limited to:

- ETL/VaR and sVaR, and specific risks;
- utilisation of the above against predefined limits;
- risk concentrations and build-ups;
- governance issues, such as limit breaches;
- risk factor sensitivities, stress test results and earnings volatility;
- nominal exposures;
- profit and loss attribution;
- risk and profit trends;
- internal model back testing results; and
- model risk.

Model risk reports on market risk, valuation and curve construction models, as well as the independent validation of models, are provided to the FirstRand model risk and validation committee and the Corporate and Institutional RCC committee on a quarterly basis. Information in the model risk reports includes, but is not limited to, an overview of activities of the market risk technical committee, approval of independently validated models, model risk classifications, and material issues and corrective actions.

INTERNAL MODELS APPROACH (IMA): DOMESTIC TRADING PORTFOLIOS

The internal VaR model for general market risk was approved by the PA for domestic trading units. For all international entities, the standardised approach is used for regulatory market risk capital purposes. Economic capital for market risk is calculated using liquidity-adjusted ETL plus an assessment of specific risk.

The risk related to market risk-taking activities is measured as the higher of the group's internal ETL measure (as a proxy for economic capital) and regulatory capital based on VaR plus sVaR. The 10-day holding period used in calculation of a 10-day VaR, 10-day sVaR and ETL is directly modelled on the group's operating platform.

Market risk in the trading book for the group is taken and managed by RMB using risk limits approved by the Corporate and Institutional FRM executive committee and MIRC. ETL/VaR limits are set for portfolios and risk types, with market liquidity being a primary factor in determining the level of limits set. Market risk limits are governed according to the market risk framework. The ETL/VaR model is designed to take into account a comprehensive set of risk factors across all asset classes.

VaR enables the group to apply a consistent measure across all trading desks and products. It allows a comparison of risk in different businesses, and provides a means of aggregating and netting positions in a portfolio to reflect correlations and offsets between different asset classes. Furthermore, it facilitates comparisons of market risk both over time and against daily trading results.

QUANTIFICATION OF RISK EXPOSURES

ETL	The internal measure of risk is an ETL metric at the 99% confidence level under the full revaluation methodology using historical risk factor scenarios (historical simulation method). In order to accommodate the regulatory stress loss imperative, the set of scenarios used for revaluation of the current portfolio comprises historical scenarios which incorporate both the past 260 trading days and at least one static period of market distress (2008/2009). The ETL is liquidity adjusted for illiquid exposures. Holding periods, ranging between 10 and 90 days or more, are used in the calculation and are based on an assessment of distressed liquidity of portfolios.
VaR and sVaR	VaR is calculated at the 99%, 10-day actual holding period level using data from the past 260 trading days. For regulatory capital purposes, this is supplemented with a sVaR, calibrated to a one-year period of stress observed in history (2008/2009). The choice of period 2008/2009 is based on the assessment of the most volatile period in recent history. sVaR calculations are based on the same systems, trade information and processes as VaR calculations. The only difference is that sVaR is supplemented with historical risk factor scenarios (historical simulation method) as an input for the full revaluation methodology. The historical factor scenarios include historical market data from a period of significant financial stress, characterised by high volatilities in recent history. When simulating potential movements in risk factors, both absolute and relative risk factors are used. VaR calculations over a holding period of one day are used as an additional tool in the assessment of market risk. The updating of historical scenarios is kept within the one-month regulatory requirement and is monitored on a daily basis.

The group's VaR should be interpreted taking into account the limitations of this methodology, namely:

- historical simulation VaR may not provide an accurate estimate of future market movements;
- the use of a 99% confidence level does not reflect the extent of potential losses beyond that percentile – ETL is a better measure to quantify losses beyond that percentile (but still subject to similar limitations as stated for VaR);
- the use of a one-day time horizon is not a fair reflection of profit or loss for positions with low trading liquidity, which cannot be closed out or hedged in one day;
- as exposures and risk factors can change during daily trading, exposures and risk factors are not necessarily captured in the VaR calibration which uses end-of-day trading data; and
- where historical data is not available, time series data is approximated or backfilled using appropriate quantitative methodologies. Use of proxies is, however, limited.

These limitations mean that the group cannot guarantee that losses will not exceed VaR. Recognising its limitations, VaR is supplemented with stress testing to evaluate the potential impact on portfolio values of more extreme, though plausible, events or movements in a set of financial variables.

The group does not apply the incremental risk charge or comprehensive risk capital charge approach.

Risk concentrations

Risk concentrations are controlled by means of appropriate ETL sublimits for individual asset classes and the maximum allowable exposure for each business unit. In addition to the general market risk limits described above, limits covering obligor-specific risk and event risk utilisation against these limits are monitored continuously, based on the regulatory building block approach.

RWA flow statement for IMA market risk exposures

Regulatory capital for domestic trading units is based on the internal VaR model supplemented with sVaR. VaR is calculated at the 99%, 10-day actual holding period level using data from the past 260 trading days. sVaR is calculated using a predefined static stress period (2008/2009). VaR calculations over a holding period of one day are used as an additional tool in the assessment of market risk.

The group's subsidiaries in the rest of Africa and the bank's foreign branches are measured using the regulatory standardised approach for regulatory capital and an internal stress loss methodology for internal measurement of risk. Capital is calculated for general and specific market risk using the Basel III standardised duration methodology.

The following flow statement explains the variations in the market risk RWA determined under IMA.

MR2: RWA FLOW STATEMENT OF MARKET RISK EXPOSURES UNDER IMA*

R million	VaR	sVaR	Total RWA
1. **RWA at 31 March 2019**	**6 611**	**9 949**	**16 560**
2. Movement in risk levels	**(3 291)**	**(1 566)**	**(4 857)**
3. Model updates/changes	**657**	**911**	**1 568**
4. Methodology and policy	**–**	**–**	**–**
5. Acquisitions and disposals	**–**	**–**	**–**
6. Foreign exchange movements	**–**	**–**	**–**
7. Other	**–**	**–**	**–**
8. **RWA at 30 June 2019**	**3 977**	**9 294**	**13 271**

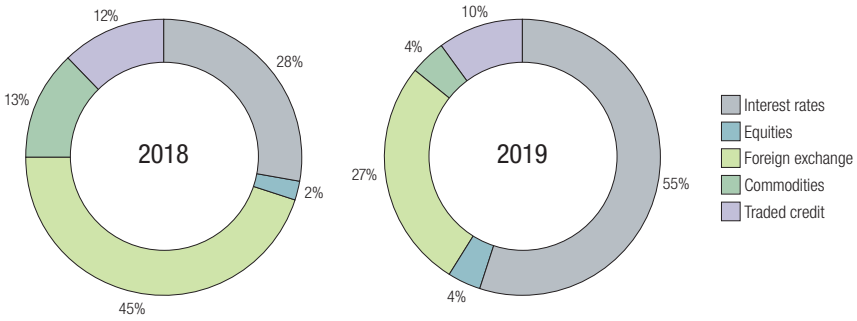
* *The group does not use the incremental risk charge and comprehensive risk measure approaches.*

The movement in market risk RWA for the year ended 30 June 2019 relates to a reduction in RMB interest rate and foreign exchange positions combined with client hedging activity undertaken.

VaR exposure per asset class

The following chart shows the distribution of exposures per asset class across the group's trading activities at 30 June 2019 based on the VaR methodology. Interest rate risk represented the most significant exposure at 30 June 2019. The increase in exposure to the interest rate asset class is due to the change in calculation of VaR and sVaR on inflation products on the Murex platform and due to normal business activities. The new calculation follows a more risk sensitive approach which resulted in an increase in VaR and sVaR, but does not indicate that the former approach undervalued the risk exposure.

TRADED MARKET RISK VaR EXPOSURE PER ASSET CLASS FOR THE GROUP EXCLUDING SUBSIDIARIES IN THE REST OF AFRICA (EXCLUDING DIVERSIFICATION EFFECTS ACROSS JURISDICTIONS)



IMA values

Total market risk is split between traded and non-traded market risk in the following tables. Traded market risk represents the portfolios that are designated as trading book for regulatory reporting. Non-traded market risk represents the portfolios that are structural in nature and are used to manage banking book risk. The non-traded market risk portfolio is directly influenced by the foreign exchange markets and, therefore, still forms part of the group's total market risk and is included in this disclosure.

The group does not use the incremental risk charge (rows 9 – 12 of the MR3 template) and comprehensive risk measure (rows 13 – 17 of the MR3 template) approaches.

MR3: IMA VALUES FOR TRADED MARKET RISK

	FRB SA	
R million	**As at 30 June 2019**	As at 30 June 2018
VaR (10-day 99%)		
1. Maximum value	**255**	241
2. Average value	**92**	84
3. Minimum value	**34**	40
4. Period end	**139**	112
sVaR (10-day 99%)		
5. Maximum value	**360**	283
6. Average value	**144**	133
7. Minimum value	**35**	80
8. Period end	**338**	127
VaR (1-day 99%)		
Maximum value	**103**	215
Average value	**43**	57
Minimum value	**10**	23
Period end	**89**	34

MR3: IMA VALUES FOR NON-TRADED MARKET RISK

R million	FRB SA	
	As at 30 June 2019	As at 30 June 2018
VaR (10-day 99%)		
1. Maximum value	**202**	217
2. Average value	**86**	55
3. Minimum value	**8**	23
4. Period end	**29**	80
sVaR (10-day 99%)		
5. Maximum value	**246**	209
6. Average value	**121**	91
7. Minimum value	**20**	41
8. Period end	**66**	101
VaR (1-day 99%)		
Maximum value	**68**	127
Average value	**26**	25
Minimum value	**4**	10
Period end	**11**	23

MR3: IMA VALUES FOR TOTAL MARKET RISK

R million	FirstRand group*		FRB SA	
	As at 30 June 2019	As at 30 June 2018	**As at 30 June 2019**	As at 30 June 2018
VaR (10-day 99%)				
1. Maximum value	**333**	389	**330**	358
2. Average value	**154**	148	**142**	110
3. Minimum value	**25**	64	**20**	57
4. Period end	**202**	201	**125**	185
sVaR (10-day 99%)				
5. Maximum value	**591**	344	**456**	275
6. Average value	**219**	182	**192**	170
7. Minimum value	**71**	97	**71**	97
8. Period end	**395**	218	**395**	205
VaR (1-day 99%)				
Maximum value			**105**	273
Average value			**52**	63
Minimum value			**6**	26
Period end			**92**	45

* *FirstRand group VaR numbers include the foreign branches but exclude the subsidiaries in the rest of Africa, which are reported on in the standardised approach for market risk. The sVaR numbers relate to FRB SA only.*

The increase in market risk across the group emanated mainly from a change in the calculation of VaR and sVaR on inflation products as a result of the implementation of the Murex platform and due to normal business activities.

Stress testing

Stress testing provides an indication of potential losses that could occur under extreme market conditions. The ETL assessment provides a view of risk exposures under stress conditions.

Additional stress testing to supplement the ETL assessment is conducted using historical market downturn scenarios and includes the use of "what-if" hypothetical and forward-looking simulations. Stress test calibrations are reviewed regularly to ensure that results are indicative of the possible impact of severely distressed and event-driven market conditions. Stress and scenario analyses are regularly reported to and considered by the relevant governance bodies.

Earnings volatility

A key element of the group's risk/return framework is an assessment of potential earnings volatility that may arise from underlying activities. Earnings volatility for market risk is quantified by subjecting key market risk exposures to predetermined stress conditions, ranging from business-as-usual stress through severe stress and event risks.

In addition to assessing the maximum acceptable level of earnings volatility, stress testing is used to understand sources of earnings volatility and highlight unused capacity within the group's risk appetite. Market risk earnings volatility is calculated and assessed on a quarterly basis.

Regulatory back testing

Back testing is performed to verify the predictive ability of the VaR model and ensure ongoing appropriateness. The back testing process is a regulatory requirement and seeks to estimate the performance of the regulatory VaR model. Performance is measured by the number of exceptions to the model, i.e. net trading profit and loss in one trading day is greater than the estimated VaR for the same trading day. The group's procedures could be underestimating VaR if exceptions occur regularly (a 99% confidence interval indicates that one exception will occur in 100 days).

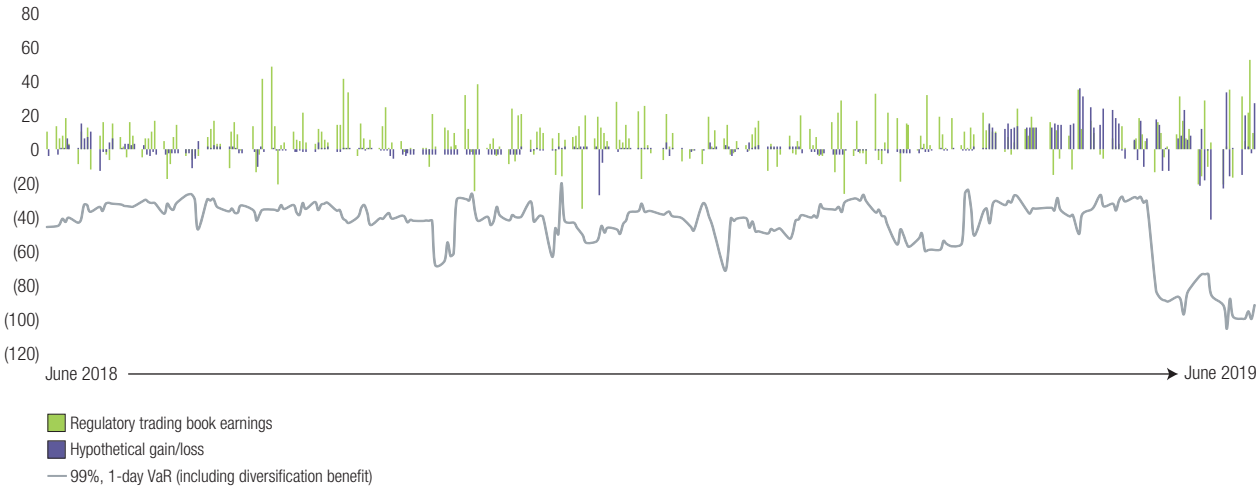
The regulatory standard for back testing is to measure daily actual and hypothetical changes in portfolio value against VaR at the 99th percentile (one-day holding period equivalent). The number of breaches over a period of 250 trading days is calculated, and should the number exceed that which is considered appropriate, the model is recalibrated.

Back testing: daily regulatory trading book earnings versus 1-day, 99% VaR

The group tracks its daily domestic earnings profile as illustrated in the following chart. The earnings and 1-day VaR relate to the group's internal VaR model. Exposures were contained within risk limits during the year ended 30 June 2019.

MR4: COMPARISON OF VAR ESTIMATES WITH GAINS AND LOSSES FOR FRB SA

R million



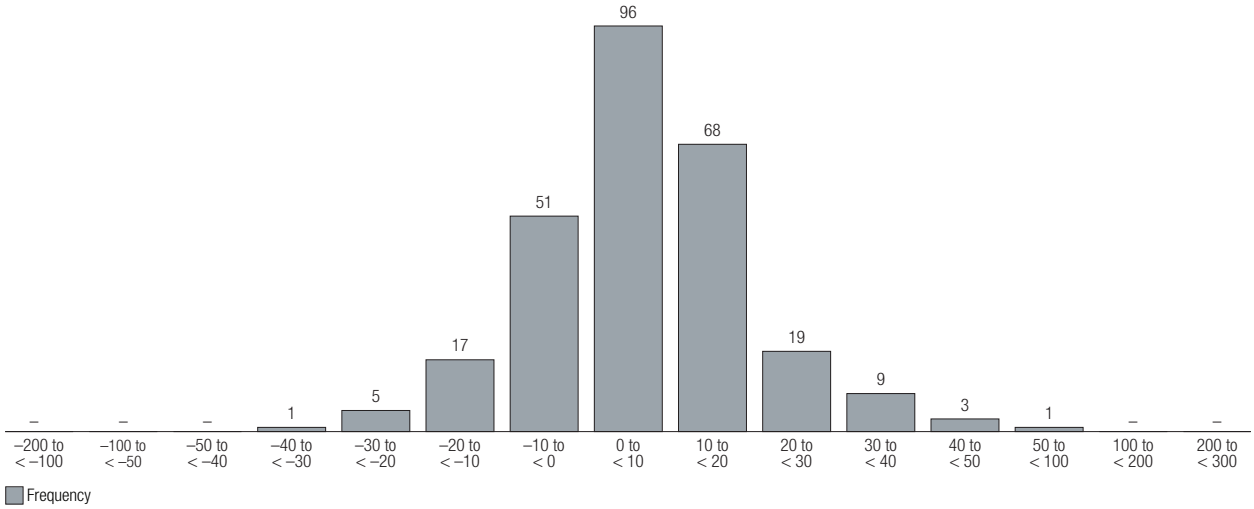
The increase in the 1-day, 99% VaR in May 2019 was mainly due to a change in VaR calculation with the implementation of the Murex platform. Trading book earnings did not exceed 1-day VaR during the year. This indicates that the group's internal model quantifies market risk appropriately. Although VaR has increased due to the valuation methodology on inflation products on the Murex platform, the underlying market risk exposure remains within limits.

Distribution of daily trading earnings from trading units

The following histogram shows the daily revenue for the group's domestic trading units for the year ended 30 June 2019. The results are skewed towards profitability.

FRB SA DISTRIBUTION OF DAILY EARNINGS – FREQUENCY

Days in a period



STANDARDISED APPROACH: GENERAL AND SPECIFIC RISK

The bank's India and London branches and the group's subsidiaries in the rest of Africa also have market risk exposure. The India and London branches are measured and managed on the same basis as the domestic portfolios for internal measurement, with regulatory capital based on the regulatory standardised approach. The subsidiaries in the rest of Africa are measured using the regulatory standardised approach for regulatory capital and an internal stress loss methodology for internal measurement of risk. Under the standardised approach, capital is calculated for general market risk and specific risk. Capital for specific risk is held in addition to general market risk capital.

General market risk capital	The general market risk capital calculation is based on the duration methodology. To calculate the general market risk capital charge, the long or short position (at current market value) of each debt instrument and other sources of interest rate exposure, including derivatives, is distributed into appropriate time bands by maturity. The long and short positions in each time band are then summed respectively and multiplied by the appropriate risk weight factor (reflecting the price sensitivity of the positions to changes in interest rates) to determine the risk weighted long and short market risk positions for each time band.

Specific risk capital	Specific risk accurately measures idiosyncratic risk not captured by general market risk measures for interest rate and equity risk, such as default, credit migration and event risks, and identifies concentrations in a portfolio. The total regulatory specific risk capital amount is the sum of equity-specific risk and interest rate-specific risk, and is based on the Basel III standardised approach duration method.

FRB SA's balance sheet is exposed to interest rate and equity-specific risk. The bank's India and London branches and the group's subsidiaries in the rest of Africa are exposed to interest rate and foreign exchange (general risk). Aldermore is exposed to foreign exchange (general risk).

MR1: MARKET RISK UNDER STANDARDISED APPROACH – RISK WEIGHTED ASSETS

	RWA	
R million	**As at 30 June 2019**	As at 30 June 2018
Outright products		
1. Interest rate risk	**7 890**	6 759
– Specific risk	**5 507**	5 137
– General risk	**2 383**	1 622
2. Equity risk	**641**	168
– Specific risk	**641**	168
– General risk	**–**	–
3. Foreign exchange risk	**2 721**	2 780
– Traded market risk	**509**	248
– Non-traded market risk	**2 212**	2 532
4. Commodity risk	**–**	–
9. Total	**11 252**	9 707

Market risk was contained within acceptable stress loss limits and effectively managed across the subsidiaries during the year.

Options are excluded from using IMA (rows 5 – 7 of the MR1 template are therefore excluded), (refer to *MR3: IMA values for traded market risk* table) and securitisations (row 8 of the MR1 template are therefore excluded) are capitalised under the securitisation framework (refer to the *Securitisation* section). The increase in standardised RWA relates to interest rate general risk driven by increased business activities in the rest of Africa subsidiaries, together with a marginal increase in interest rate specific risk. Equity specific risk increased due to exposures on exchange-traded fund portfolios and equity exposures.

Non-traded market risk

For non-traded market risk, the group distinguishes between **interest rate risk in the banking book** and **structural foreign exchange risk**. The following table describes how these risks are measured, managed and governed.

RISK AND JURISDICTION	RISK MEASURE	MANAGED BY	OVERSIGHT
Interest rate risk in the banking book			
Domestic – FNB, WesBank and FCC	→ 12-month earnings sensitivity. → Economic sensitivity of open risk position.	Group Treasury	FCC Risk Management Group ALCCO
Subsidiaries in the rest of Africa, the bank's foreign branches and Aldermore	→ 12-month earnings sensitivity. → Economic sensitivity of open risk position.	In-country treasuries	Group Treasury FCC Risk Management In-country ALCCOs Rest of Africa and foreign branches ALCCO
Structural foreign exchange			
Group	→ Total capital in a functional currency other than rand. → Impact of translation back to rand reflected in group's income statement. → Foreign currency translation reserve value.	Group Treasury	Group ALCCO FCC Risk Management

Interest rate risk in the banking book

INTRODUCTION AND OBJECTIVES

IRRBB relates to the sensitivity of a bank's financial position and earnings to unexpected, adverse movements in interest rates.

IRRBB originates from the differing repricing characteristics of balance sheet positions/instruments, yield curve risk, basis risk and client optionality embedded in banking book products.

The endowment effect, which results from a large proportion of non- and low-rate liabilities that fund variable-rate assets, remains the primary driver of IRRBB and results in the group's earnings being vulnerable to interest rate cuts, or conversely benefiting from interest rate hikes.

IRRBB is an inevitable risk associated with banking and can be an important source of profitability and shareholder value. FirstRand continues to manage IRRBB on an earnings approach, with the aim to protect and enhance the group's earnings and economic value through the cycle within approved risk limit and appetite levels. The endowment hedge portfolio is managed dynamically taking into account the continuously changing macroeconomic environment.

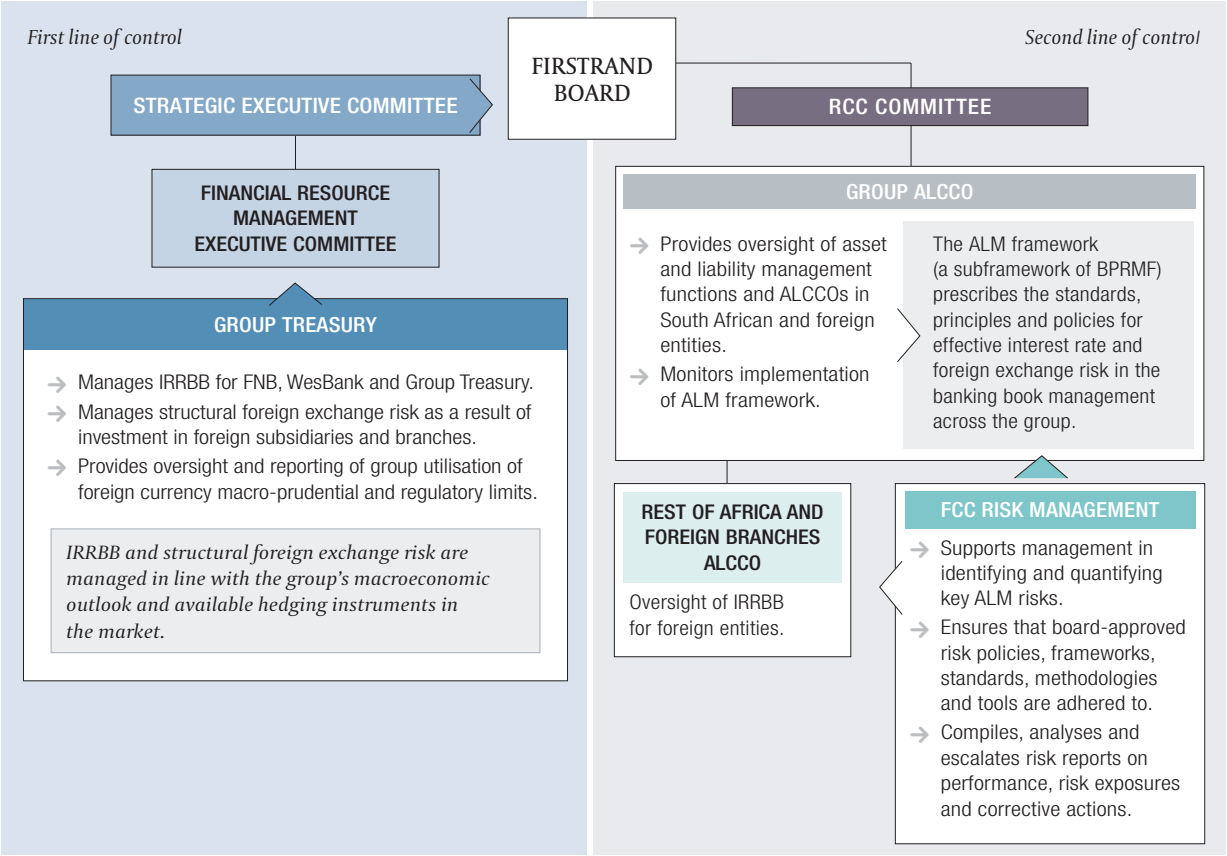
Hedges are in place to protect the group's net interest margin. These hedges are actively monitored along with macroeconomic factors impacting domestic rates, as well as rates in the other countries where the group operates.

YEAR UNDER REVIEW AND FOCUS AREAS

YEAR UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
→ The SARB increased interest rates by 25 bps in November 2018, which impacted earnings positively.	→ The BCBS, through the task force for IRRBB, has published more robust regulations for IRRBB. The group is addressing these new requirements, which will be formally adopted on 1 June 2021. → Given the current uncertainty about the level and direction of future interest rates, the group continues to actively manage endowment.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

IRRBB GOVERNANCE STRUCTURE



ASSESSMENT AND MANAGEMENT

FRB SA

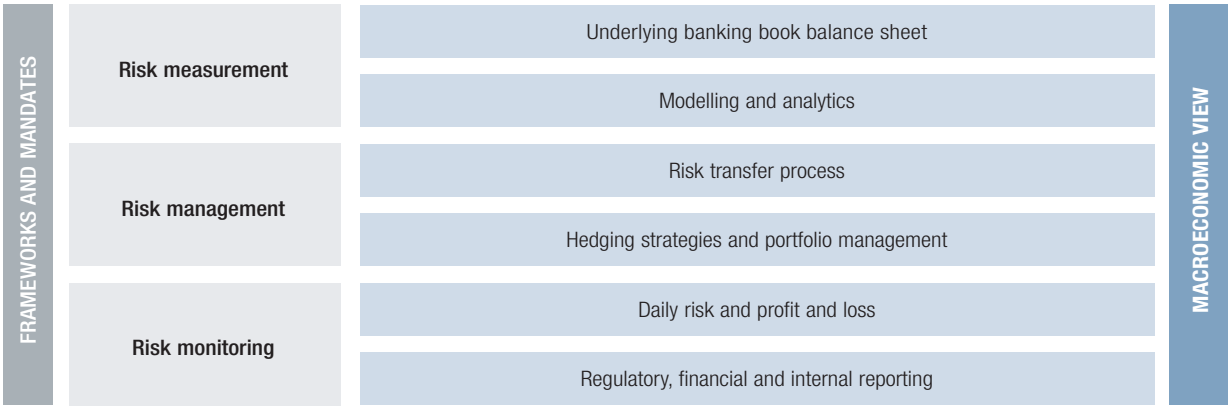
The measurement techniques used to monitor IRRBB include NII sensitivity/earnings risk and NAV/economic value of equity (EVE) sensitivity. A repricing gap is also generated to better understand the repricing characteristics of the balance sheet. In calculating the repricing gap, all banking book assets, liabilities and derivative instruments are placed in gap intervals based on repricing characteristics. The repricing gap, however, is not used for management decisions.

The internal funds transfer pricing process is used to transfer interest rate risk from the operating businesses to Group Treasury. This process allows risk to be managed centrally and holistically in line with the group's macroeconomic outlook. Management of the resultant risk position is achieved by balance sheet optimisation or through the use of derivative transactions. Derivative instruments used are mainly interest rate swaps, for which a liquid market exists. Where possible, hedge accounting is used to minimise accounting mismatches, thus ensuring that amounts deferred in equity are released to the income statement at the same time as movements attributable to the underlying hedged asset/liability. Interest rate risk from the fixed-rate book is managed to low levels with remaining risk stemming from timing and basis risk.

Foreign operations

Management of subsidiaries in the rest of Africa, Aldermore and the bank's foreign branches is performed by in-country management teams with oversight provided by Group Treasury and FCC Risk Management. For subsidiaries, earnings sensitivity measures are used to monitor and manage interest rate risk in line with the group's appetite. Where applicable, PV01 and ETL risk limits are also used for endowment hedges.

INTEREST RATE RISK MANAGEMENT AND ASSESSMENT



Sensitivity analysis

A change in interest rates impacts both the earnings potential of the banking book (as underlying assets and liabilities reprice to new rates), as well as in the economic value/NAV of an entity (as a result of a change in the fair value of any open risk portfolios used to manage the earnings risk). The role of management is to protect both the financial performance as a result of a change in earnings and to protect the long-term economic value. To achieve this, both earnings sensitivity and economic value sensitivity measures are monitored and managed within appropriate risk limits and appetite levels, considering the macroeconomic environment and factors which can cause a change in rates.

Earnings sensitivity

Earnings models are run on a monthly basis to provide a measure of the NII sensitivity of the existing banking book balance sheet to shocks in interest rates. Underlying transactions are modelled on a contractual basis and behavioural adjustments are applied where relevant. The calculation assumes a constant balance sheet size and product mix over the forecast horizon. A pass-through assumption is applied in relation to non-maturing deposits, which reprice at the group's discretion. This assumption is based on historical product behaviour.

The following tables show the 12-month NII sensitivity for sustained, instantaneous parallel 200 bps downward and upward shocks to interest rates. The increased sensitivity is attributable to the decrease in hedges put in place to manage the margin impact of the capital and deposit endowment books through the cycle. Given current uncertainty about the level and direction of future interest rates, the endowment book remains actively managed.

Most of the group's NII sensitivity relates to the endowment book mismatch. The group's average endowment book was R240 billion for the year ended 30 June 2019. Total sensitivity is measured to rand rate moves in South Africa and to local currency moves in the subsidiaries in the rest of Africa, and Aldermore.

PROJECTED NII SENSITIVITY TO INTEREST RATE MOVEMENTS

	As at 30 June 2019		
	Change in projected 12-month NII		
R million	**FRB SA**	**Subsidiaries in the rest of Africa and the bank's foreign branches**	**Total FirstRand**
Downward 200 bps	**(3 678)**	**(757)**	**(4 435)**
Upward 200 bps	**3 118**	**370**	**3 488**

	As at 30 June 2018		
	Change in projected 12-month NII		
R million	FRB SA	Subsidiaries in the rest of Africa and the bank's foreign branches	Total FirstRand
Downward 200 bps	(3 045)	(339)	(3 384)
Upward 200 bps	2 551	540	3 091

Assuming no change in the balance sheet and no management action in response to interest rate movements, an instantaneous, sustained parallel 200 bps decrease in interest rates would result in a reduction in projected 12-month NII of R4 435 million. A similar increase in interest rates would result in an increase in projected 12-month NII of R3 488 million.

Economic value of equity

An EVE sensitivity measure is used to assess the impact on the total NAV of the group as a result of a shock to underlying rates. Unlike the trading book, where a change in rates will impact fair value income and reportable earnings of an entity when a rate change occurs, the realisation of a rate move in the banking book will impact the distributable and non-distributable reserves to varying degrees and is reflected in the NII margin more as an opportunity cost/benefit over the life of the underlying positions. As a result, a purely forward-looking EVE measure applied to the banking book, be it a 1 bps shock or a full-stress shock, is monitored relative to total risk limits, appetite levels and current economic conditions.

The EVE shocks applied are based on regulatory guidelines and comprise a sustained, instantaneous parallel 200 bps downward and upward shock to interest rates. This is applied to risk portfolios as managed by Group Treasury which, as a result of the risk transfer through the internal funds transfer pricing process, capture relevant open risk positions in the banking book. This measure does not take into account the unrealised economic benefit embedded as a result of the banking book products which are not recognised at fair value.

The following table:

- highlights the sensitivity of banking book NAV as a percentage of total capital; and
- reflects a point-in-time view, which is dynamically managed and can fluctuate over time.

BANKING BOOK NAV SENSITIVITY TO INTEREST RATE MOVEMENTS AS A PERCENTAGE OF TOTAL GROUP CAPITAL

	FRB SA		FirstRand group	
%	**As at 30 June 2019**	As at 30 June 2018	**As at 30 June 2019**	As at 30 June 2018
Downward 200 bps	**1.98**	3.07	**1.35**	2.35
Upward 200 bps	**(1.77)**	(2.69)	**(1.20)**	(2.05)

The decrease in NAV sensitivity in the year under review was attributable to a decrease in tactical hedges. The group has decreased its endowment book hedge position relative to the prior year, in line with its macroeconomic outlook.

Structural foreign exchange risk

INTRODUCTION AND OBJECTIVES

Foreign exchange risk is the risk of an adverse impact on the group's financial position or earnings or other key ratios as a result of movements in foreign exchange rates impacting balance sheet exposures.

The group is exposed to foreign exchange risk as a result of on-balance sheet transactions in a currency other than the rand, as well as through structural foreign exchange risk from the translation of its foreign operations' results into rand. The impact on equity as a result of structural foreign exchange risk is recognised in the foreign currency translation reserve balance, which is included in qualifying capital for regulatory purposes.

Structural foreign exchange risk as a result of net investments in entities with a functional currency other than rand is an unavoidable consequence of having offshore operations. It can be a source of both investor value through diversified earnings, and unwanted volatility as a result of currency fluctuations. Group Treasury is responsible for actively monitoring the net capital invested in foreign entities, as well as the rand value of any capital investments and dividend distributions.

YEAR UNDER REVIEW AND FOCUS AREAS

YEAR UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
→ Continued to strengthen principles for the management of foreign exchange positions and funding of the group's foreign entities. → Monitored the net open forward position in foreign exchange exposure against limits in each of the group's foreign entities.	→ Continue to assess and review the group's foreign exchange exposures and enhance the quality and frequency of reporting.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

Reporting on and management of the group's foreign exchange exposure and macro-prudential limit utilisation is centrally owned by Group Treasury as the clearer of all group currency positions. Group Treasury is also responsible for oversight of structural foreign exchange risk with reporting through to group ALCCO, a subcommittee of the RCC committee. Refer to the governance structure in the *Interest rate risk in the banking book* section.

ASSESSMENT AND MANAGEMENT

The ability to transact on-balance sheet in a currency other than the home currency (rand) is governed by in-country macro-prudential and regulatory limits. In the group, additional board limits and management appetite levels are set for this exposure. The impact of any residual on-balance positions is managed as part of market risk reporting (see *Traded market risk* section). Group Treasury is responsible for consolidated group reporting and utilisation of these limits against approved limits and appetite levels.

Foreign exchange risk in the banking book comprises funding and liquidity management, and risk mitigating activities. To minimise funding risk across the group, foreign currency transactions are matched, where possible, with residual liquidity risk managed centrally by Group Treasury, and usually to low levels (see *Funding and liquidity risk* section). Structural foreign exchange risk impacts both the current NAV of the group as well as future profitability and earnings potential. Economic hedging is undertaken where viable, given market constraints and within risk appetite levels. Where possible, hedge accounting is applied. Any open positions are included as part of market risk in the trading book.

NET STRUCTURAL FOREIGN EXPOSURES AND SENSITIVITY

The following table provides an overview of the group's exposure to entities with functional currencies other than rand and the pre-tax impact on equity of a 15% change in the exchange rate between the South African rand and the relevant functional foreign currencies. There were no significant structural hedging strategies in the year under review. The increase in Ghanaian cedi exposure from 30 June 2018 was attributable to the injection of capital into First National Bank Ghana to meet the increased regulatory minimum requirement. The increase in US dollar exposure from June 2018 was as a result of the capitalisation of RMB International Mauritius. The increase in sterling exposure from June 2018 was the result of an upfront capital injection into Aldermore to fund the first 15 months of MotoNovo origination following the integration of the two businesses.

NET STRUCTURAL FOREIGN EXPOSURES

	As at 30 June 2019		As at 30 June 2018	
R million	**Exposure**	**Impact on equity from 15% currency translation shock**	Exposure	Impact on equity from 15% currency translation shock
Functional currency				
Botswana pula	**4 648**	**697**	4 410	661
US dollar	**7 733**	**1 160**	4 168	625
Sterling	**18 873**	**2 831**	14 667	2 200
Nigerian naira	**1 696**	**254**	1 349	202
Australian dollar	**213**	**32**	385	58
Zambian kwacha	**697**	**105**	805	121
Mozambican metical	**421**	**63**	370	56
Indian rupee	**741**	**111**	676	101
Ghanaian cedi	**1 121**	**168**	365	55
Tanzanian shilling	**340**	**51**	413	62
Common Monetary Area (CMA) countries*	**6 939**	**1 041**	6 533	980
Total	**43 422**	**6 513**	34 141	5 121

* *Currently Namibia, eSwatini and Lesotho are part of the CMA. Unless these countries decide to exit the CMA, rand volatility will not impact these countries' rand reporting values.*

Equity investment risk

INTRODUCTION AND OBJECTIVES

Equity investment risk is the risk of an adverse change in the fair value of an investment in a company, fund or listed, unlisted or bespoke financial instruments.

Equity investment risk in the group arises primarily from equity exposures from private equity and investment banking activities in RMB, e.g. exposures to equity risk arising from principal investments or structured lending.

Other sources of equity investment risk include strategic investments held by WesBank, FNB, Aldermore and FCC. These investments are, by their nature, core to the individual businesses' daily operations and are managed as such.

Ashburton Investments, the group's asset management business, also contributes to equity investment risk. This risk emanates from long-term and short-term seeding activities both locally and offshore. Short-term seeding of new traditional and alternative funds exposes the group to equity investment risk until the funds reach sufficient scale for sustainable external distribution. The timeline for short-term seeding is defined in the business cases for the funds and typically ranges between one and three years.

Long-term seeding is provided if there is alignment with the business strategy, the business case meets the group's internal return hurdle requirements, and the liquidity and structure of the funds imply that an exit will only be possible over a longer period, aligned with the interests of other investors in these funds. Long-term investments, such as investment in private equity and real estate, will only be exited at the end of the investment horizon of the funds. This maturity period typically ranges from five to eight years post investment in the fund.

Regulatory developments

The BCBS published the standard on *Capital requirements for banks' equity investments in funds* in December 2013, which requires banks' equity investment risk exposures in funds to be risk weighted using the following approaches with varying degrees of risk sensitivity:

- look-through approach;
- mandate-based approach; and
- fall-back approach.

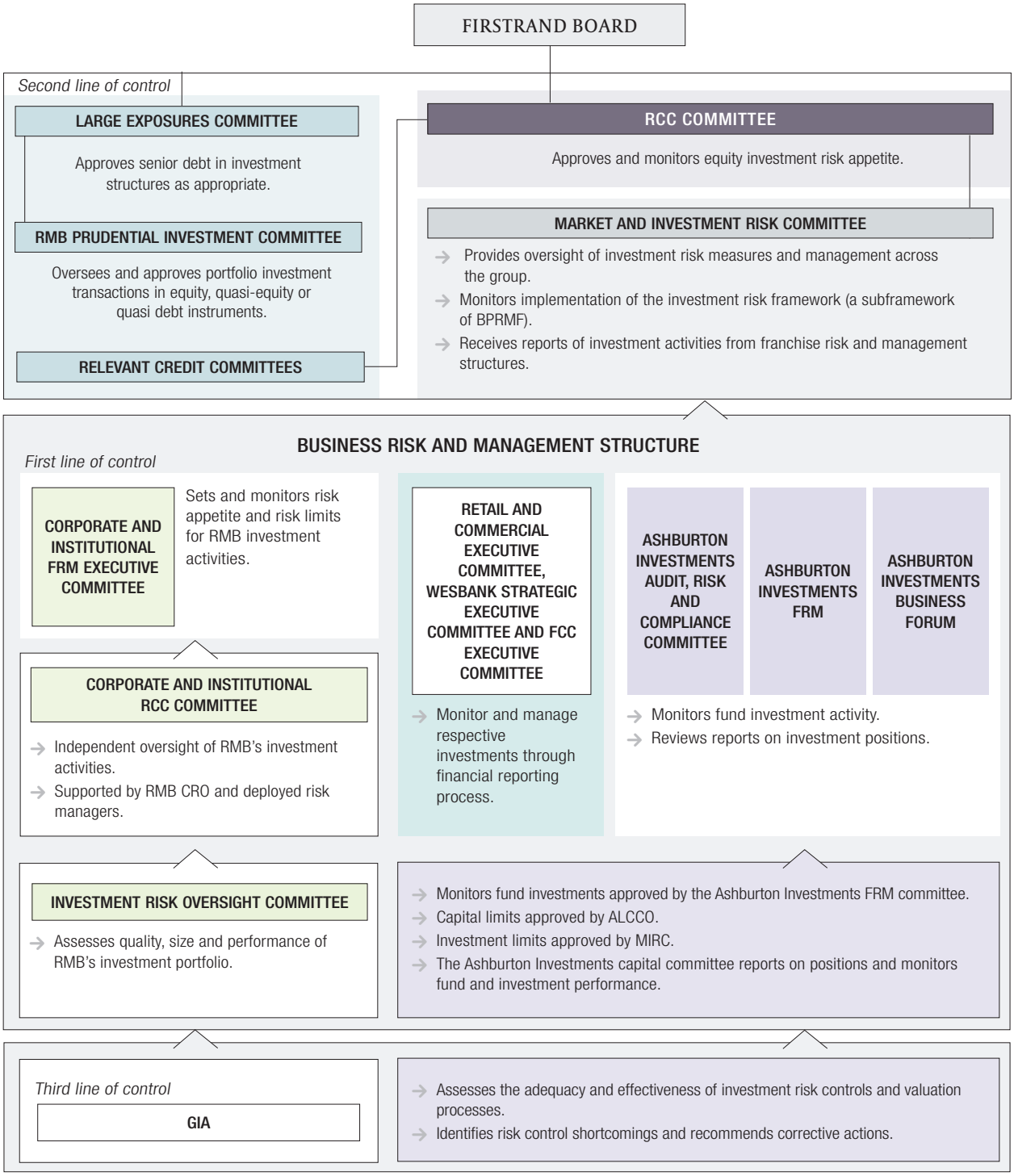
To ensure that banks have appropriate incentives to enhance the management of exposures, the degree of conservatism increases with each successive approach. The BCBS also incorporated a leverage adjustment to RWAs derived from the above approaches to appropriately reflect a fund's leverage. The proposed implementation date for this standard was 1 October 2019, however, this have been delayed until further notice is provided by the PA. The group is refining its processes to comply with the standard. The overall quality of the investment portfolio remains acceptable and is within risk appetite.

YEAR UNDER REVIEW AND FOCUS AREAS

YEAR UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
→ The year under review was characterised by significantly lower realisations relative to the prior year and R1.2 billion of new investments in the private equity portfolio. The quality of the investment portfolio remains acceptable and within risk appetite. → The unrealised value of RMB Private Equity's portfolio at 30 June 2019 was R3.5 billion (2018: R3.7 billion).	→ Continue to exit the last remaining non-performing exposures in the RMB Resources portfolio. → Final preparations for the introduction of the new BCBS standard for the treatment of investments in funds.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

EQUITY INVESTMENT RISK GOVERNANCE STRUCTURE



ASSESSMENT AND MANAGEMENT

Management of exposures

The equity investment risk portfolio is managed through a rigorous evaluation and review process from inception to exit of a transaction. All investments are subject to a comprehensive due diligence, during which a thorough understanding of the target company's business, risks, challenges, competitors, management team and unique advantage or value proposition is developed.

For each transaction, an appropriate structure is put in place which aligns the interests of all parties involved through the use of incentives and constraints for management and other investors. Where appropriate, the group seeks to take a number of seats on the company's board and maintains close oversight through monitoring of operations and financial discipline.

The investment thesis, results of the due diligence process and investment structure are discussed at the investment committee before final approval is granted. In addition, normal biannual reviews are performed for each investment and crucial parts of these reviews, such as valuation estimates, are independently peer reviewed.

Recording of exposures – accounting policies

All equity investments in scope of IFRS 9 are measured at fair value in the statement of financial position, with value changes recognised in profit or loss, except for those equity investments for which the entity has elected to present value changes in "other comprehensive income". There is no "cost measurement" exemption for unquoted equities.

If an equity investment is not held for trading, an entity can make an irrevocable election at initial recognition to measure it at fair value through other comprehensive income with only dividend income recognised in profit or loss. Despite the fair value requirement for all equity investments, IFRS 9 contains guidance on when cost may be the best estimate of fair value and also when it might not be representative of fair value.

Consistent with the group's accounting policies, the consolidated financial statements include the assets, liabilities and results of operations of all equity investments where the group has control of the relevant activities and the ability to use that control to affect the variable returns received from the entity.

Equity investments in associates and joint ventures are included in the consolidated financial statements using the equity-accounting method. Associates are entities where the group holds an equity interest of between 20% and 50%, over which it has the ability to exercise significant influence, but not control. Joint ventures are entities in which the group has joint control over the relevant activities of the joint venture through a contractual agreement.

Measurement of risk exposures and stress testing

Risk exposures are measured in terms of potential loss under stress conditions. A series of standardised stress tests are used to assess potential losses under current market conditions, adverse market conditions, as well as severe stress/event risk conditions. These stress tests are conducted at individual investment and portfolio level.

In the private equity portfolio, the group targets an investment profile that is diversified along a number of pertinent dimensions, such as geography, industry, investment stage and vintage.

Economic and regulatory capital calculations are augmented by regular stress tests of market values and underlying drivers of valuation, e.g. company earnings, valuation multiples and assessments of stress resulting from portfolio concentrations.

Regulatory and economic capital

The simple risk weighted method under the market-based approach (300% for listed equities or 400% for unlisted equities) is applied with the scalar (where appropriate) for the quantification of regulatory capital. Under the Regulations, the risk weight applied to investments in financial, banking and insurance entities is subject to the aggregate and individual value of the group's shareholding in these investments and also in relation to the group's qualifying CET1 capital.

For economic capital purposes, an approach using market value shocks to the underlying investments is used to assess economic capital requirements for unlisted investments after taking any unrealised profits into account.

Where price discovery is reliable, the risk of listed equity investments is measured based on a 90-day ETL calculated using RMB's internal market risk model. The ETL risk measure is supplemented by a measure of the specific (idiosyncratic) risk of the individual securities per the specific risk measurement methodology.

EQUITY INVESTMENT RISK VALUATIONS

The table below shows the equity investment risk exposure and sensitivity. The 10% sensitivity movement is calculated on the carrying value of investments, excluding those subject to the ETL process and including the carrying value of investments in associates and joint ventures.

INVESTMENT RISK EXPOSURE AND SENSITIVITY OF INVESTMENT RISK

R million	**As at 30 June 2019**	As at 30 June 2018
Listed investment risk exposure included in the equity investment risk ETL process	**170**	1
ETL on above equity investment risk exposures	**–**	–
Estimated sensitivity of remaining investment balances		
Sensitivity to 10% movement in market value on investment fair value	**357**	245
Cumulative gains realised from sale of positions in the banking book during the year	**848**	2 046

CR10: EQUITY POSITIONS IN THE BANKING BOOK UNDER MARKET-BASED APPROACH (SIMPLE RISK WEIGHT METHOD)

	As at 30 June 2019				
R million	**On-balance sheet amount**	**Off-balance sheet amount**	**Risk weight**	**Exposure amount**	**RWA**
Categories					
Exchange-traded equity exposures*	**170**	**–**	**300%**	**170**	**542**
Private equity exposures*	**6 429**	**24**	**400%**	**6 453**	**27 359**
Subtotal	**6 599**	**24**		**6 623**	**27 901**
Financial, banking and insurance entities	**5 207**	**–**	**250%**	**5 207**	**13 018**
Total	**11 806**	**24**		**11 830**	**40 919**

* *RWA includes 6% scalar.*

	As at 30 June 2018				
R million	On-balance sheet amount	Off-balance sheet amount	Risk weight	Exposure amount	RWA
Categories					
Exchange-traded equity exposures*	112	–	300%	112	355
Private equity exposures*	5 662	198	400%	5 860	24 846
Subtotal	5 774	198		5 972	25 201
Financial, banking and insurance entities	3 739	–	250%	3 739	9 347
Total	9 513	198		9 711	34 548

* *RWA includes 6% scalar.*

The following tables include the investment valuations and regulatory capital requirements.

INVESTMENT VALUATIONS AND ASSOCIATED REGULATORY CAPITAL REQUIREMENTS

	As at 30 June 2019		
R million	**Publicly quoted investments**	**Privately held investments**	**Total**
Carrying value of investments	**170**	**11 660**	**11 830**
Per risk bucket			
250% – Investments in financial, banking and insurance entities	**–**	**5 207**	**5 207**
300% – Listed investments	**170**	**–**	**170**
400% – Unlisted investments	**–**	**6 453**	**6 453**
Latent revaluation gains not recognised in the balance sheet*	**–**	**3 808**	**3 808**
Fair value	**170**	**15 468**	**15 638**
Total unrealised gains recognised directly in the balance sheet through equity instead of the income statement*	**–**	**–**	**–**
Capital requirement**	**63**	**4 716**	**4 780**

** These unrealised gains or losses are not included in Tier 1 or Tier 2 capital.*

*** Capital requirement calculated at 11.680% of RWA (excluding the bank-specific individual capital requirement) and includes capital on investments in financial, banking and insurance entities.*

	As at 30 June 2018		
R million	Publicly quoted investments	Privately held investments	Total
Carrying value of investments	112	9 599	9 711
Per risk bucket			
250% – Investments in financial, banking and insurance entities	–	3 739	3 739
300% – Listed investments	112	–	112
400% – Unlisted investments	–	5 860	5 860
Latent revaluation gains not recognised in the balance sheet*	–	5 679	5 679
Fair value	112	15 278	15 390
Total unrealised gains recognised directly in the balance sheet through equity instead of the income statement*	–	4	4
Capital requirement**	40	3 832	3 872

** These unrealised gains or losses are not included in Tier 1 or Tier 2 capital.*

*** Capital requirement calculated at 11.208% of RWA (excluding the bank-specific individual capital requirement) and includes capital on investments in financial, banking and insurance entities.*

Insurance risk

INTRODUCTION AND OBJECTIVES

Insurance risk arises from the inherent uncertainties of liabilities payable under an insurance contract. These uncertainties can result in the occurrence, amount or timing of the liabilities differing from expectations. Insurance risk can arise throughout the product cycle and is related to product design, pricing, underwriting or claims management.

The risk arises from the group's third-party insurance operations housed in FirstRand Insurance Holdings Limited. Currently insurance risk arises from the group's long-term insurance operations, underwritten through its subsidiary FirstRand Life Assurance Limited (FirstRand Life), and short-term insurance operations, underwritten through its subsidiary FirstRand Short-term Insurance (FirstRand STI).

FirstRand Life currently underwrites funeral policies, accidental death plans, risk policies, credit life policies (against FNB credit products) and health cash plans. FirstRand Life also writes linked-investment policies. There is, however, no insurance risk associated with these policies as these are not guaranteed. These policies are all originated through FNB.

FirstRand STI currently underwrites legal plans and warranty policies and is in the process of developing further short-term insurance products. These policies are also originated through FNB.

Funeral policies pay benefits upon death of the policyholder and, therefore, expose the group to mortality risk. The underwritten risk policies and credit life policies further cover policyholders for disability and critical illness, which are morbidity risks. Credit life policies also cover retrenchment risk. Health cash plans pay a benefit per day for each day that a policyholder is hospitalised. As a result of these insurance risk exposures, the group is exposed to catastrophe risk, stemming from the possibility of an extreme event linked to any of the above. Legal plans provide legal assistance or pay for legal fees on the occurrence of events as specified in the policies.

For all the above, the risk is that the decrement rates (e.g. mortality rates, morbidity rates, etc.) and associated cash flows are different from those assumed when pricing or reserving. These risks can further be broken down into parameter risk, random fluctuations and trend risk, which may result in the parameter value assumed differing from actual experience.

Policies underwritten by FirstRand Life and FirstRand STI are available through FNB's distribution channels. Some of these channels introduce the possibility of anti-selection, which also impacts the level of insurance risk.

YEAR UNDER REVIEW AND FOCUS AREAS

YEAR UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
→ Growth of policies on the short-term insurance licence. → Growth in risk policies. → Progress with implementation of the short-term insurance policy administration system.	→ Embedding of risk appetite. → Setting up risk management processes and tools for the short-term insurance business.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

FirstRand Life and FirstRand STI are wholly-owned subsidiaries of FirstRand Insurance Holdings, which in turn is a wholly-owned subsidiary of the group. FirstRand Life is an approved long-term insurer, in terms of the Long-term Insurance Act. FirstRand STI is an approved short-term insurer, in terms of the Short-term Insurance Act 53 of 1998.

FirstRand Insurance Holdings' board committees include an audit and risk committee, an asset, liability and capital committee, and a remuneration committee. The asset, liability and capital committee is responsible for:

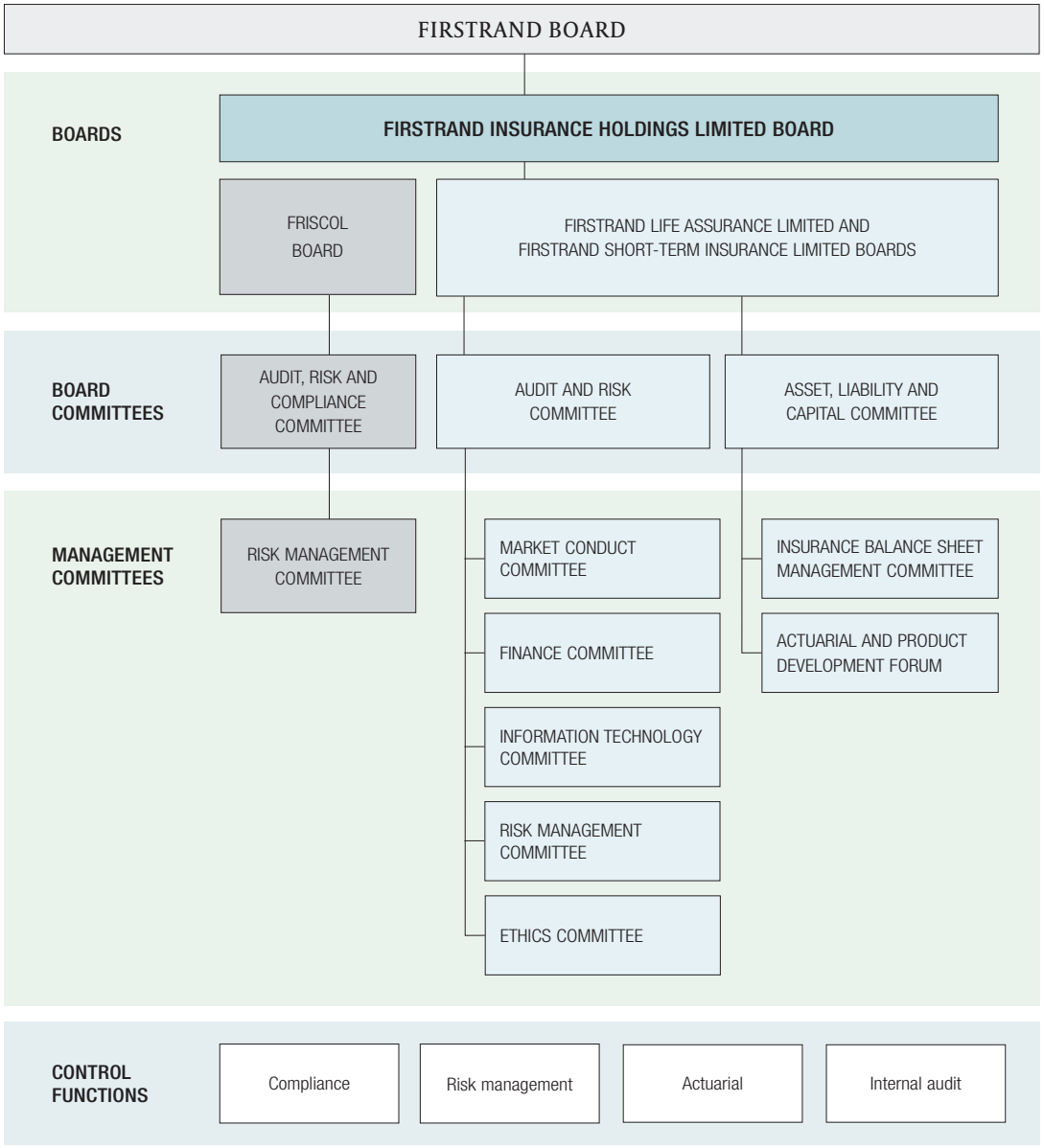
- → providing oversight of the product suite;
- → approving new products;
- → financial resource management; and
- > governance, and challenging inputs, models and results of pricing and valuations.

To ensure consistency within the group, FirstRand Life, FirstRand STI and FirstRand Insurance Holdings have the same board and common members in the group committees. Relevant group, and Retail and Commercial segment committees have oversight of and receive feedback from the appropriate FirstRand insurance committees.

An important component of the management of insurance risk is the control functions required to be set up, namely compliance, risk management, actuarial and internal audit.

The following diagram illustrates the insurance risk governance structures in FirstRand Insurance Holdings.

INSURANCE RISK GOVERNANCE STRUCTURE



ASSESSMENT AND MANAGEMENT

The group manages its insurance risk to be within its stated risk appetite. This is translated to risk limits for various metrics that can be monitored and managed.

The assessment and management of risk focuses on two main areas, namely:

- product design and pricing; and
- the management of the in-force book.

Ensuring that insurance risk is priced correctly and understood is an important component of managing insurance risk. This is achieved through the following measures.

- Rigorous and proactive risk management processes to ensure sound product design and accurate pricing, including:
  - independent model validation;
  - challenging assumptions, methodologies and results;
  - debating and challenging design, relevance, target market, market competitiveness and treating customers fairly;
  - identifying potential risks;
  - monitoring business mix and mortality risk of new business; and
  - thoroughly reviewing policy terms and conditions.
- Risk policies sold to FNB's premium customer segment are underwritten. This allows underwriting limits and risk-based pricing to be applied to manage the insurance risk. Where specific channels introduce the risk of anti-selection, mix of business by channel is monitored. On non-underwritten products, insurance risk can be controlled through lead selection for outbound sales.
- The design of appropriate reinsurance structures is an important component of the pricing and product design to keep risk exposure within appetite.

The assessment and management of insurance risk of the in-force book uses the following methodologies, including advisory and mandatory actuarial methodologies.

- Insurance risk is managed through monitoring and reporting the frequency and severity of claims by considering incidence rates, claims ratios and business mix.
- For the life business, the actuarial valuation process involves the long-term projection of in-force policies and the setting up of insurance liabilities. This gives insight into the longer-term evolution of the risks on the portfolio. The short-term insurance liabilities comprise an outstanding claims reserve, an unearned premium reserve and an incurred but not reported reserve (IBNR). Adequate reserves are set for future and current claims and expenses. Where actual benefits are different from those originally estimated, actuarial models and assumptions are updated to reflect this. This is fed back into the pricing process.
- There are also reinsurance agreements in place to mitigate various life insurance risks and manage catastrophe risk. This is currently being put in place for the short-term insurance business.
- Asset/liability management is performed to ensure that assets backing insurance liabilities are appropriate and liquid.
- Stress and scenario analyses are performed to provide insights into the risk profile and future capital position.

The management of insurance risk is governed by several policies and there are processes, tools and systems in the business to assess and manage insurance risk.

The own risk and solvency assessment (ORSA) is defined as the entirety of the processes and procedures employed to identify, assess, monitor, manage and report on short- and long-term risks that FirstRand Insurance Holdings faces or might face, and to determine the own funds necessary to ensure that overall solvency needs are met at all times and are sufficient to achieve its business strategy. An ORSA report is produced annually.

CAPITAL

Capital for insurance activities is calculated on a regulatory basis (solvency and assessment management (SAM)) and an economic basis. Target levels for capital coverage are specified in the insurance risk appetite statement and have been met over the year under review. Capital is risk sensitive and is also used to understand the exposure to insurance risk.

Model risk

INTRODUCTION AND OBJECTIVES

The use of models causes model risk, which is the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports. Model risk can lead to financial losses, poor business and strategic decision-making, or damage to the group's reputation.

The group recognises two types of model risk:

Intrinsic model risk – the risk inherent in the modelling process, which cannot be directly controlled but can be appropriately mitigated. Examples of intrinsic model risk drivers include model complexity, availability of data and model materiality.

Incremental model risk – the risk caused by inadequate internal practices and processes, which can be actively mitigated through quality model documentation, robust governance processes and a secure model implementation environment.

A model is defined as a quantitative method, system or approach that applies statistical, economic, financial or mathematical theories, techniques and assumptions to process input data into quantitative estimates. A model generally consists of three components:

- information input component, which delivers assumptions and data to the model;
- processing component, which transforms inputs into estimates; and
- reporting component, which translates the estimates into useful business information.

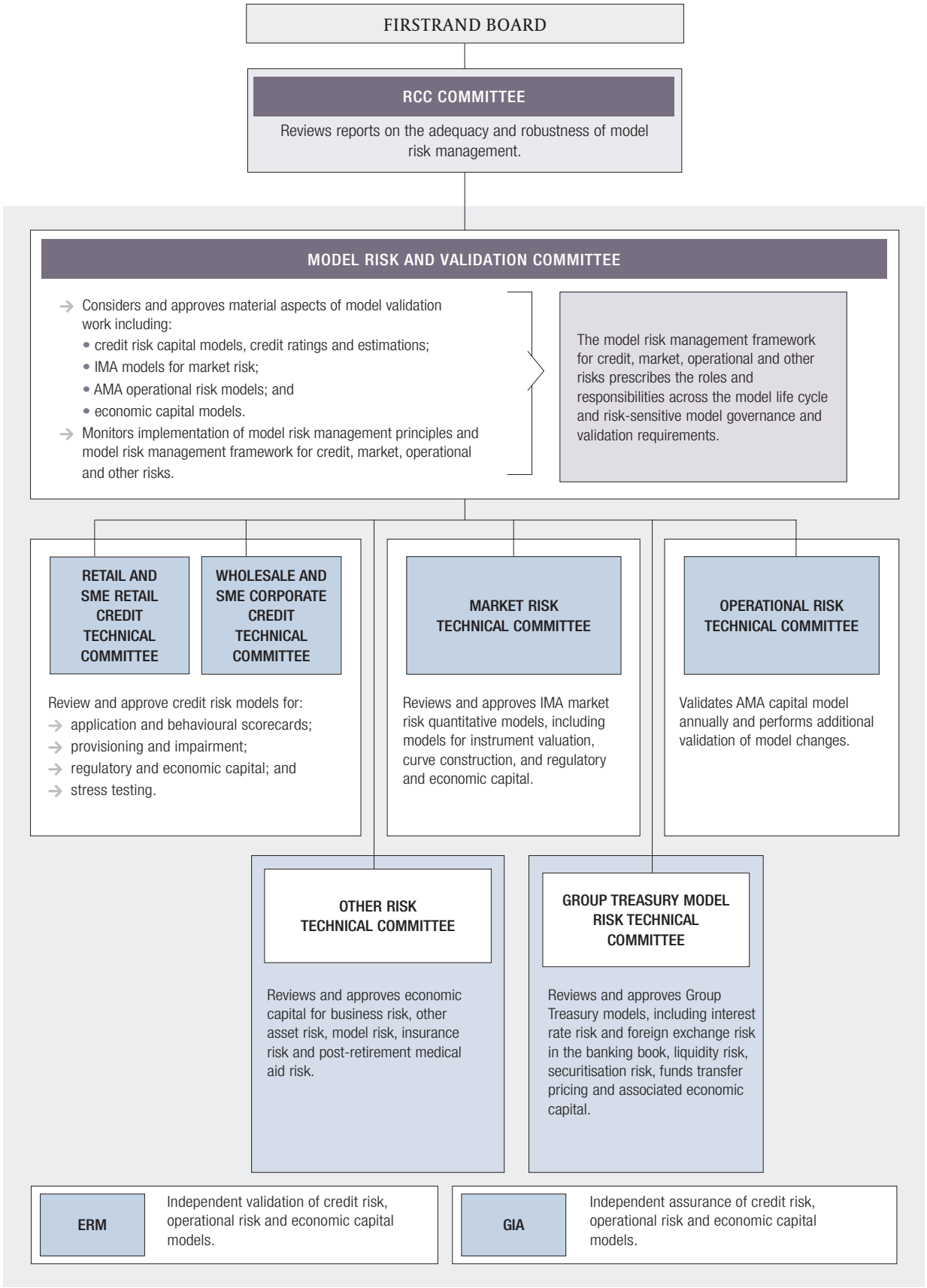
Model risk exists as models may have fundamental errors and produce inaccurate outputs when assessed against the design objective and intended business use. Model risk may also arise as a result of model results being used incorrectly or inappropriately.

YEAR UNDER REVIEW AND FOCUS AREAS

YEAR UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
→ Refined the group model risk management and reporting frameworks. → Refined the methodology for model risk economic capital calculation to apply more granular add-ons and to allow allocation of model risk. → Developed a risk tolerance statement for model risk. → Continued the rollout of model risk management software for market risk valuation and curve construction models.	→ Embed model risk data quality management and reporting in line with BCBS 239 standards. → Commence rollout of model risk management software to additional model types, including credit application scorecards.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

MODEL RISK GOVERNANCE STRUCTURE



ASSESSMENT AND MANAGEMENT

The level of model risk related to a particular model is influenced by model complexity, uncertainty about inputs and assumptions, and the extent to which the model is used to make financial and strategic decisions. The risks, from individual models and in aggregate, are assessed and managed. Aggregated model risk is affected by interaction and dependencies among models, reliance on common assumptions, data or methodologies and any other factors that could adversely affect several models and their outputs simultaneously. As an understanding of the source and magnitude of model risk is key to effective management of the risk, model risk management is integrated into the group's risk management processes.

Various principles are applied in the model risk management process. Risk owners assess which of these principles are applicable to a specific model and determine levels of materiality for model evaluation and validation.

MODEL RISK MANAGEMENT PRINCIPLES

Data and systems	Development	Testing and validation	Monitoring	Governance
→ Use systems that ensure data and reporting integrity. → Use suitable data. → Maintain master list of field data. → Implement appropriate system controls. → Assess data quality.	→ Document model design, theory and logic which is supported by published research and industry practice. → Expert challenge of methods and assumptions. → Ensure appropriate conservatism.	→ Provide independent validation. → Review documentation, empirical evidence, model construction assumptions and data. → Perform sensitivity analysis. → Perform stress testing. → Obtain independent assurance from GIA.	→ Perform regular stress testing and sensitivity analysis. → Perform quantitative outcome analysis. → Perform back testing and establish early warning metrics. → Assess model limitations. → Set and test error thresholds. → Test model validity.	→ Provided by three lines of control. → Approve model risk management framework. → Ensure effective management. → Ensure approval committees with adequate skills. → Ensure appropriate documentation.

MODEL RISK MEASUREMENT

A scorecard with risk factors based on model risk management principles is used for model risk measurement and quantification of capital. Intrinsic model risk and incremental model risk are assessed and tracked separately, then combined to obtain overall model risk scorecards. The scorecard is tailored for each risk type by applying risk-type specific weightings to each scorecard dimension and by refining the considerations for each dimension to be specific to that risk type.

Each regulatory capital and economic capital model is rated using the model risk scorecard and assigned an overall model risk rating of low, medium or high. These ratings are used to determine the model risk economic capital add-on multiplier, which is applied to the output of capital models to determine the amount of model risk economic capital to be held.

Tax risk

INTRODUCTION AND OBJECTIVES

Tax risk is defined as the risk of:

- financial loss due to the final determination of the tax treatment of a transaction by revenue authorities being different from the implemented tax consequences of such a transaction, combined with the imposition of penalties;
- sanction or reputational damage due to non-compliance with the various revenue acts; and/or
- the inefficient use of available mechanisms to benefit from tax dispensations.

Accordingly, any event, action or inaction in the strategy, operations, financial reporting or compliance that either adversely affects the entity's tax or business position, or results in unanticipated penalties, assessments, additional taxes, harm to reputation, lost opportunities or financial statement exposure is regarded as tax risk.

FirstRand's long-term strategic objective is to deliver superior and sustainable economic returns to shareholders within acceptable levels of volatility and maintain balance sheet strength. The group's tax strategy is aligned with these principles. A variety of local and international taxes arise in the normal course of business, including corporate income taxes, employees' taxes, value-added taxes, securities transfer taxes, stamp duties, customs duties and withholding taxes, to name but a few.

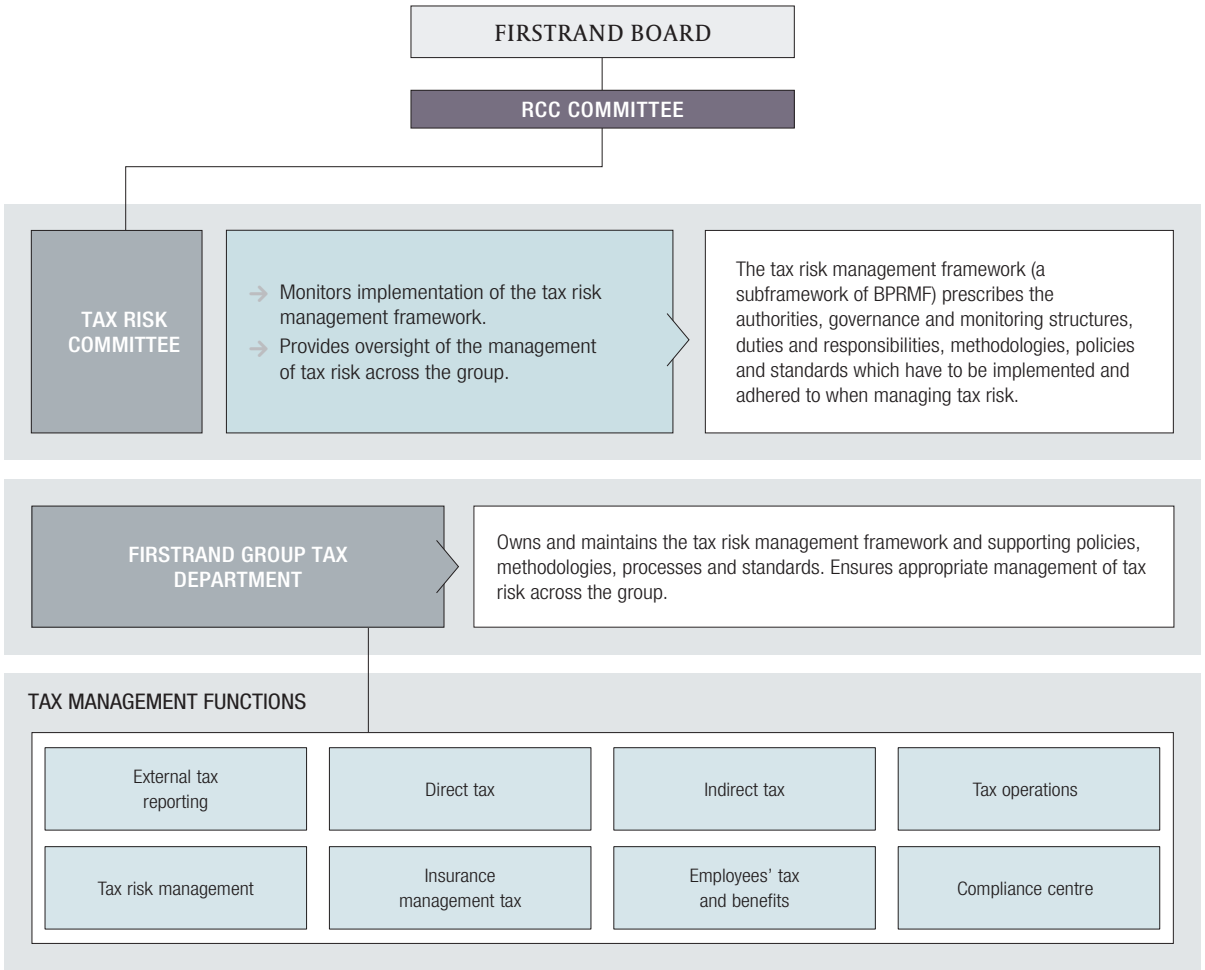
The FirstRand Group Tax Department (FRGT) is mandated by the FirstRand tax risk committee to manage tax risks. FirstRand is committed to complying with all taxation laws and influencing tax policy, legislation and practice; to developing and implementing value-adding initiatives in a responsible manner; and to maintaining effective relationships with all stakeholders. It is imperative that the group demonstrates integrity in the way it conducts business, and FirstRand commits to being responsible and accountable in managing tax risk.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

The head of FRGT takes ultimate responsibility for tax risk management for all taxes on a group-wide basis. The responsibility at a business/entity level lies with the CEO and CFO of the relevant business or entity. They are responsible for keeping tax-related risks at an acceptable level. To enable the various CFOs to fulfil their tax risk management responsibilities, FRGT has deployed a team of tax specialists to fulfil an advisory role regarding tax issues arising within the various businesses/entities.

Tax risks, as well as improvements to the compliance processes, are reported periodically to the RCC committee, which is responsible for the management and monitoring of tax risks, and ultimately reported to the FirstRand board, which is responsible for the group's business tax strategies and outcomes.

TAX RISK GOVERNANCE STRUCTURE



ASSESSMENT AND MANAGEMENT

Tax risk management is the systematic approach to proactively identify, evaluate, manage and report on tax risks and data quality risks (as far as the relevant tax data is under the control of FRGT) within the agreed and acceptable parameters to facilitate the group's tax strategy.

FRGT engages in efficient tax planning that supports business and reflects commercial and economic activity. The tax laws in all of the jurisdictions in which the group operates are fully complied with and, in so doing, the risk of uncertainty or disputes are minimised. Transactions between FirstRand entities are conducted on an arm's-length basis and in accordance with the current Organisation for Economic Cooperation and Development (OECD) principles. Where tax incentives or exemptions exist, FRGT seeks to apply them responsibly in the manner intended by governments and fiscal authorities. FirstRand establishes entities in jurisdictions suitable to hold its offshore operations, considering the business activities and the prevailing regulatory environments in those jurisdictions.

FirstRand seeks to build sustainable working relationships with governments and fiscal authorities, which are based on mutual respect. Where possible, FRGT works in conjunction with fiscal authorities to resolve disputes and engage with governments on the development of tax laws. FirstRand is committed to the principles of openness and transparency to build trust between the group and fiscal authorities and to align the group with the various systems of tax collection.

Tax risk management forms part of the group's overall internal control processes. Responsibility and accountability for FirstRand's tax affairs is clearly defined in the tax risk management framework.

The group is responsible for ensuring that policies and procedures which support the tax risk management framework are in place, monitored and used consistently in all operations and that the group's tax team has the skills and experience to implement these appropriately. In this regard, external tax risks arising from legislative and regulatory changes are actively managed, as well as internal tax risks, comprising of compliance and operational risks. Management oversight also include controls over compliance processes which are implemented, with their effectiveness being monitored on an ongoing basis.

REGULATORY ENVIRONMENT

The regulatory bodies to which the group subscribes and complies with are listed below.

BASA	FirstRand is a member of BASA, which has a tax committee that promotes discussions on tax issues relating to the various South African revenue acts, advocates for tax reforms, and ensures that the regulatory and supervisory framework addresses relevant issues.
South African Revenue Service (SARS)	The group complies with the accord that was signed between SARS and BASA to improve tax compliance.
UK Code of Practice on Taxation for Banks	The group subscribes to this code to ensure compliance of the bank's London Branch and Aldermore with the law on tax matters in the UK.
Base Erosion and Profit Shifting (BEPS) recommendations	The group filed country-by-country reports in accordance with the BEPS recommendations issued by the OECD to address the weaknesses in the international tax system.
Foreign Account Tax Compliance Act (FATCA) and Common Reporting Standards (CRS)	FATCA and CRS submissions were successfully submitted to SARS to aid in the exchange of information amongst financial institutions.
King IV	FirstRand endorses and endeavours to adhere to the corporate governance guidelines and principles of King IV (2016). FirstRand has complied with these principles in all material respects throughout the year.

Operational risk

INTRODUCTION AND OBJECTIVES

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people, or systems, or from external events.

The group continuously evaluates and enhances existing frameworks, policies, methodologies, processes, standards, systems and infrastructure to ensure that the operational risk management practices are practical, adequate, effective, adaptable, and in line with business needs, regulatory developments and best practice, given existing and emerging risks.

OPERATIONAL RISK OBJECTIVES AND PROGRAMME

KEY OBJECTIVES

> The group's objective is to build an effective and forward-looking operational risk management programme to support the group in the execution of its strategy.

- Prioritise operational risk management activities to support execution of strategy and strengthen key controls.
- Embed simple, efficient and effective risk management tools.
- Provide forward-looking and dynamic operational risk management information for use in business decision-making.
- Embed vendor risk management discipline.
- Prepare the risk management community in the group for increased management of risks associated with digitisation.
- Enhance operational risk management awareness within the organisation.
- Assess the impact of operational risk-related regulatory developments and ensure compliance in a manner that derives business and risk management value.

OPERATIONAL RISK MANAGEMENT PROGRAMME COMPONENTS

- Establishment, review and implementation of operational risk management framework and policies.
- Operational risk management tools and processes (including risk identification, assessment and quantification).
- Operational risk analytics and capital.
- Operational risk management IT systems and management information.
- Operational risk projects/initiatives.
- Operational risk governance and reporting.
- Operational risk management advisory and support services to business.

Year under review and focus areas

There are ongoing control improvement initiatives aimed at addressing key operational risk themes, mitigating existing and emerging risks and improving operational risk maturity. The progress on these initiatives and impact on the operational risk profile is tracked and reported on regularly at business and group level through management, combined assurance and risk governance processes and are also considered part of the operational risk appetite setting and risk scenario processes. Risk management programmes are continuously reviewed and enhanced to focus on identified key and emerging risks based on changes in the internal and external environments.

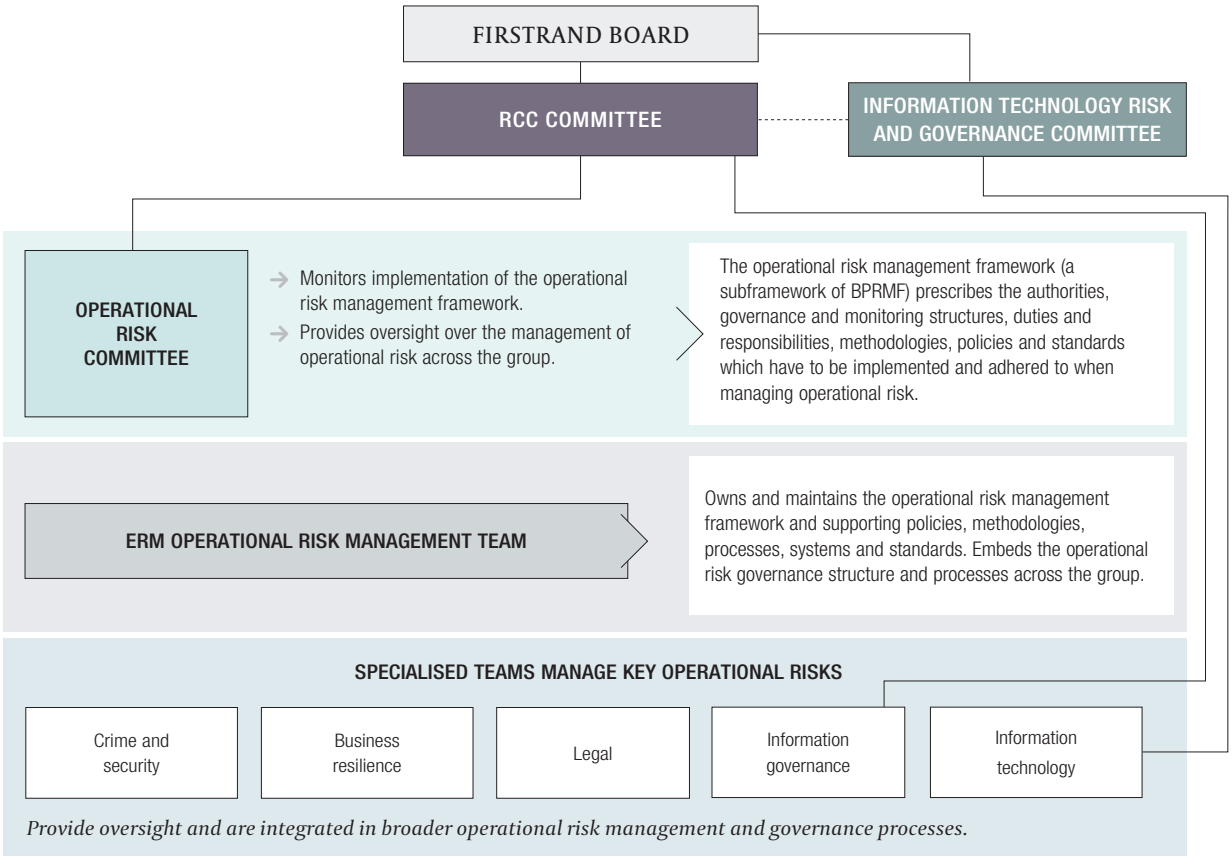
The principal operational risks currently facing the group are:

- **cyber risk** (including information security), given the growing sophistication of cyber attacks locally and globally;
- **technology risk**, due to the pace of technology change and increasing digitisation;
- **vendor risk**, due to lack of direct control over external service providers;
- **commercial and violent crime** (including internal fraud); and
- **execution, delivery and process management risk** (risk of process weaknesses and control deficiencies) as the business continues to grow and evolve.

YEAR UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
→ Coordinated group-wide cyber incident response planning. → Validated the quality of operational risk information derived through implementation of operational risk tools. → Guided and tracked group-wide actions and initiatives to comply with BCBS 239. → Embedded an efficient cloud computing and offshoring of data risk management programme within the group's operational risk appetite and in terms of regulatory requirements. → Integrated operational risk and IT risk management processes for greater efficiency and alignment. → Aligned operational risk processes and reporting to changes in the group's organisational structure to support strategy execution. → Process (business and operational risk) automation projects continued to reduce manual processes and improve controls. → Continued to review, test and align risk mitigation strategies to combat cybercrime and ensure that controls are adequate and effective. → Refined processes and improved data quality and records management practices.	→ Enhance and test scenario-based cyber incident response plans. → Embed a disciplined approach to the risk assessment and management of vendors across the vendor life cycle. → Leverage the group's data capabilities optimally for operational risk management information and analysis. → Embed BCBS 239 compliance. → Automate risk reporting processes for greater efficiency and accuracy. → Prioritise operational risk management activities to support execution of strategy and strengthen key controls. → Continuously assess the risks inherent in increasing digitisation and innovative business solutions and facilitate management thereof. → Align IT and related frameworks with changing business models and the technology landscape. → Focus on holistic operational resilience. → Improve information management capabilities and the control environment, and roll out awareness programmes on records management, data quality and data privacy management.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

OPERATIONAL RISK GOVERNANCE STRUCTURE



Provide oversight and are integrated in broader operational risk management and governance processes.

MEASUREMENT OF OPERATIONAL RISK

Basel approaches

FirstRand applies **AMA** for its domestic operations. Offshore subsidiaries and operations continue to use **TSA** for operational risk and all previously unregulated entities that now form part of FRIHL, Ashburton Investments and Aldermore follow **BIA**.

Under **AMA**, FirstRand uses a sophisticated statistical model for the calculation of capital requirements, which enables a more accurate risk-based measure of capital for business units on AMA. Operational risk scenarios (covering key risks that, although low in probability, may result in severe losses) and internal loss data are direct inputs into this model.

Scenarios are derived through an extensive analysis of the group's operational risks in consultation with business and risk experts from across the group. Scenarios are cross-referenced to external loss data, internal losses, key risk indicators, process-based risk and control identification and assessments, and other pertinent information about relevant risk exposures. To ensure ongoing accuracy of risk and capital assessments, all scenarios are reviewed, supplemented and/or updated semi-annually, as appropriate.

The loss data used for risk measurement, management and capital calculations are collected for all seven Basel event types across various internal business lines. Data collection is the responsibility of business units and is overseen by the operational risk management team in ERM.

The modelled operational risk scenarios are combined with modelled loss data in a simulation model to derive the annual, aggregate distribution of operational risk losses. Basel Pillar 1 minimum capital requirements are then calculated (for the group and each operating business) as the operational VaR at the 99.9th percentile of the aggregate loss distribution, excluding the effects of insurance, expected losses and correlation/diversification.

Capital requirements are calculated for each business using the AMA capital model and then allocated to legal entities in the group based on gross income contribution ratios. This split of capital between legal entities is required for internal capital allocation, regulatory reporting and performance measurement purposes.

TSA and **BIA** capital calculations are based on a multiplication factor applied to gross income, as specified by Basel and PA regulations. These capital calculations and allocations do not make use of any risk-based information.

Business practices continuously evolve and the operational risk control environment is, therefore, constantly changing to reflect the underlying risk profile. The assessment of the operational risk profile and exposures and associated capital requirements take the following into account:

- changes in the operational risk profile, as measured by the various operational risk tools;
- material effects of expansion into new markets, new or substantially changed products or activities as well as the closure of existing operations;
- changes in the control environment – the group targets a continuous improvement in the control environment, but deterioration in effectiveness is also possible due to, for example, unforeseen increases in transaction volumes or pace of change;
- changes in organisational structure resulting in the movement of businesses and/or products from one business area to another; and
- changes in the external environment, which drive certain types of operational risk (e.g. rising civil protest actions, electricity supply shortages, increasing unemployment, etc.).

ASSESSMENT AND MANAGEMENT

Operational risk assessment and management tools

The group obtains assurance that the principles and standards in the operational risk management framework are adhered to by the three lines of control model, which is integrated in operational risk management. In this model, business units own the operational risk profile as the first line of control. In the second line of control, ERM is responsible for consolidated operational risk reporting, policy ownership and facilitation, and coordination of operational risk management, measurement and governance processes. GIA, as the third line of control, provides independent assurance on the adequacy and effectiveness of operational risk management processes and practices.

In line with international best practice, a variety of tools are employed and embedded in the assessment and management of operational risk. The approach to the implementation of these tools is reviewed on an ongoing basis to ensure that business value is delivered. The most relevant of these are outlined in the following chart.

OPERATIONAL RISK ASSESSMENT AND MANAGEMENT TOOLS

PROCESS-BASED RISK AND CONTROL IDENTIFICATION AND ASSESSMENT	KEY RISK INDICATORS
→ The risk and control assessment per product/service based on key business processes. → Integrated in day-to-day business and risk management processes. → Used by business and risk managers to identify and monitor key risks and assess effectiveness of existing controls.	→ Used across the group in all businesses as an early warning risk measure. → Highlight changing trends in exposures to specific key operational risks. → Inform operational risk profiles which are reported periodically to the appropriate management and risk committees, and are monitored on a continuous basis.
INTERNAL/EXTERNAL LOSS DATA	**RISK SCENARIOS**
→ Capturing internal loss data is a well-entrenched discipline within the group. → Internal loss data reporting and analyses occur at all levels with specific focus on root causes, and process analysis and corrective action. → External loss databases are used to learn from the loss experience of other organisations and are also an input into the risk scenario process.	→ Risk scenarios are widely used to identify and quantify low-frequency, extreme-loss events. → Senior management actively participates in the risk scenario thematic deep-dives and the overall scenario reviews. → Results are tabled to the appropriate risk committees and are used as input into the capital modelling process.

FirstRand uses an integrated and reputable operational risk system in which all operational risk assessment and management tools have been automated to provide a holistic view of the group's operational risk profile.

Operational risk events

As operational risk cannot be avoided or mitigated entirely, frequent events resulting in small losses are expected as part of business operations (e.g. external card fraud) and are budgeted for appropriately. Business units minimise these losses through improving relevant business and control practices and processes. Operational risk events resulting in substantial losses occur less frequently. The group strives to minimise these and limit their frequency and severity within its risk appetite levels through appropriate risk mitigation. Operational losses are measured and reported against the agreed operational risk appetite levels on a regular basis and necessary reviews are conducted to establish root causes and put in place appropriate action plans to prevent or reduce the risk of reoccurrence.

Operational risk management processes

A number of key risks exist for which specialised teams, frameworks, policies and processes have been established and integrated into the broader operational risk management and governance programmes as described in the following diagram.

KEY SPECIALIST RISK AND MANAGEMENT PROCESSES

	BUSINESS RESILIENCE	LEGAL	IT
Management	→ Operations should be resilient enough to withstand severe disruptions from internal failures or external events. → Business continuity strategies include regular review of business continuity plans (including disaster recovery plans) and testing. → Disruptions or incidents are assessed and reported to the relevant risk stakeholders.	→ Creation and ongoing management of contractual relationships. → Management of disputes and/or litigation. → Protection and enforcement of property rights (including intellectual property). → Account for the impact of law or changes in the law as articulated in legislation or decisions by the courts.	→ Protection of information systems against unauthorised access, destruction, modification and use. → Ensuring confidentiality, availability and integrity of systems that maintain, process, store and disseminate this information. → Systems are continuously assessed for vulnerabilities and reported to relevant risk and business stakeholders.
Committees and frameworks	→ Business resilience steering committee (a subcommittee of the operational risk committee). → Practices are documented in the business resilience policy and standards.	→ Compliance with legislation managed by RCRM. → Legal risk committee (subcommittee of operational risk committee), and subcommittees of the legal risk committee. → Legal risk management framework and subframeworks and policies.	→ Information technology risk and governance committee (board committee). → IT governance framework, IT policies and information security policy.

	INFORMATION GOVERNANCE	CRIME AND SECURITY	RISK INSURANCE
Management	→ Information is a valuable asset. → Focus on quality and protection of information against unauthorised access, destruction, modification, use and disclosure. → Ensure confidentiality, availability, integrity, sensitivity of and accountability for all information.	→ Covers internal (employees) and external crime and physical security. → Contains criminal losses with enhanced controls and real-time detection models. → Mitigates the growing cyber crime threat with measures to improve resilience against cyber attacks through integrated approach across multiple disciplines.	→ Structured insurance risk financing programme in place for material losses from first-party risks. → Insurance refined through risk profile assessment, change in group strategy or markets. → Cover for professional indemnity, directors' and officers' liability, crime, public and general liability, assets, etc.
Committees and frameworks	→ Information governance committee (subcommittee of the RCC committee). → Information governance framework, risk data aggregation and risk reporting framework and acceptable use of information resources policy.	→ Crime and security function reporting to FNB CRO with a group mandate. → Integrated crime management framework and protective security framework.	→ Cover through FRISCOL, the group's wholly-owned first-party insurance company.

Risk insurance

The group has a structured insurance risk financing programme in place, which has been developed over many years, to protect the group against unexpected material losses arising from non-trading risks. The programme is designed, where appropriate, to complement the risk management strategy to protect against the identified risks which can affect the group's financial performance or position and, therefore, negatively affect shareholder value.

The insurance risk programme is continuously refined through ongoing assessment of changing risk profiles, organisational strategy and growth, and international insurance markets. The levels and extent of insurance cover is reviewed and benchmarked annually.

The group's insurance-buying philosophy is to self-insure as much as is economically viable in line with its risk appetite, and to only protect itself against catastrophic risks through the use of third-party (re)insurers.

The insurance programme includes, *inter alia*, cover for operational risk exposures, such as professional indemnity, directors' and officers' liability, crime, public and general liability, assets, etc. This protection extends across the group and into the subsidiaries in the rest of Africa and the UK where legislation allows. The group does not consider insurance as a mitigant in the calculation of capital for operational risk purposes.

Regulatory and conduct risk

INTRODUCTION AND OBJECTIVES

Regulatory risk refers to the risk of statutory or regulatory sanction, material financial loss or reputational damage as a result of failure to comply with any applicable laws, regulations or supervisory requirements.

Conduct risk arises when employees and directors behave in a manner that would not be considered fair to other employees, financial market participants, clients or other societal stakeholders.

The group expects ethical behaviour that contributes to the overall objective of prudent regulatory compliance and risk management by striving to observe both the spirit and the letter of the law. Management's ownership and accountability contributes to this through providing responsible financial products and services, and treating customers fairly. The ethics and compliance culture embraces standards of integrity and ethical conduct which affect all stakeholders of the group, both internal and external.

Governments increasingly recognise the importance of ethical conduct in banking and, as a result, are developing regulation to enforce standards and hold business leaders accountable for their actions.

Leadership is required to integrate ethics and conduct risk objectives into commercial strategies. For this reason, strategy, leadership and the intersect with culture and conduct are continuously evaluated.

FirstRand's RCRM function is tasked with the management of the group's regulatory, ethics and conduct risk. RCRM assists senior management to effectively and expeditiously resolve identified ethics, conduct and compliance issues.

REGULATORY AND CONDUCT RISK MANAGEMENT OBJECTIVE AND APPROACH

OBJECTIVE	APPROACH
Ensure business practices, policies, frameworks and approaches across the group are consistent with applicable laws and that regulatory and conduct risks are identified and proactively managed.	→ Maintain an effective and efficient regulatory and conduct risk management framework with sufficient operational capacity to assess financial products and services against fair market conduct principles, and promote and oversee compliance with legislative and best practice requirements. → Ensure appropriate policies, standards and processes are in place to mitigate risk of abuse of the group's banking platforms for unlawful purposes. → Train employees to ensure a high level of understanding and awareness of applicable legal and regulatory frameworks pertaining to the group's business activities.

Compliance with laws and regulations applicable to the group's operations is critical to the group as non-compliance may have potentially serious consequences and lead to both civil and criminal liability, including penalties, claims for loss and damages and restrictions imposed by regulatory authorities.

Applicable laws and other requirements include:

- Financial Sector Regulation Act, 2017;
- Banks Act, 1990 and related Regulations;
- Companies Act, 2008;
- Competition Act, 1998;
- Collective Investment Schemes Control Act (CISCA), 2002;
- Financial Intelligence Centre Act, 2001;
- Long-term Insurance Act, 1998;
- Short-term Insurance Act, 1998;
- Insurance Act, 2017;
- Financial Advisory and Intermediary Services (FAIS) Act, 2002;
- National Credit Act (NCA), 2005;
- Consumer Protection Act, 2008;
- Financial Markets Act (FMA), 2012;
- Foreign Account Tax Compliance Act, 2010;
- Protected Disclosures Act, 2000;
- Protection of Personal Information Act (PoPIA), 2013;
- Prevention and Combating of Corrupt Activities Act (PRECCA), 2004;
- King Code of Governance Principles for South Africa, 2016 (King IV); and
- legislation and rules related to listed instruments on various exchanges.

YEAR UNDER REVIEW AND FOCUS AREAS

YEAR UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
→ With reference to the implementation of the Twin Peaks system of financial regulation during 2018, both the PA and the Financial Sector Conduct Authority (FSCA) published their respective regulatory strategies and also issued a number of proposed regulatory instruments in relation to new and/or amended regulatory requirements. It is expected that key focus areas will include the designation of financial conglomerates; finalisation of related requirements, also in relation to significant owners of financial institutions; and matters relating to the conduct of financial institutions, ombuds, licencing and related levies and financial stability. → The final PoPIA regulations were published by the information regulator in December 2018 but will only become effective when proclamated in the Government Gazette. Notable requirements from these regulations relate to the additional responsibilities for the information officer of a responsible party and the prescribed forms for an individual (such as a customer) to exercise their privacy rights. → Reviewed the outcomes of culture risk assessments, culture and conduct risk in specialised areas of the group and group engagement assessments. → Conducted anti-bribery and corruption risk assessments for the group's domestic operations with a public sector focus. → Reviewed whistle-blowing trends and process adequacy. → Provided training and created awareness of ethical culture. → Enhanced use of systems to prevent trading during closed periods. → Regulated group entities did not receive any material regulatory sanctions and/or penalties during the year.	→ Continue cooperation with regulatory authorities and other stakeholders, including the implementation of key aspects relating to the Financial Intelligence Centre Amendment Act and International Funds Transfer Reporting, ahead of the Financial Action Task Force mutual evaluation exercise in 2019. → The Financial Intelligence Centre Amendment Act (phase 1) was successfully implemented and the group is currently focusing on the embedment of requirements for phase 1 and the implementation of the phase 2 requirements which became effective on 1 April 2019. → Continue to make significant investments in people, systems and processes to manage risks emanating from the large number of new and/or amended local and international regulatory requirements, including the Financial Intelligence Centre Act, NCA, FAIS Act and PoPIA. → Focus on managing regulatory and conduct risks posed by clients and other external stakeholders. → Management of organisational culture risk detection, prevention and remediation, which supports regulatory and conduct risk management. → Continue to work closely with regulators and industry on the authenticated collections project, the main objective of which is to prevent debit order abuse. → Manage risks associated with illicit cross-border flows. → Review market conduct maturity and associated platform developments. → Focus on emerging culture risks and appropriate responses to the regulatory framework. → Oversee implementation of business conduct programme. → Oversee activity in the financial markets via the group's personal account trading programme. → Actively manage conflicts of interest and repositioning of the associated programme. → Development of initiatives to manage ethics and reputational risk introduced to the group by third parties.

REGULATORY UPDATE

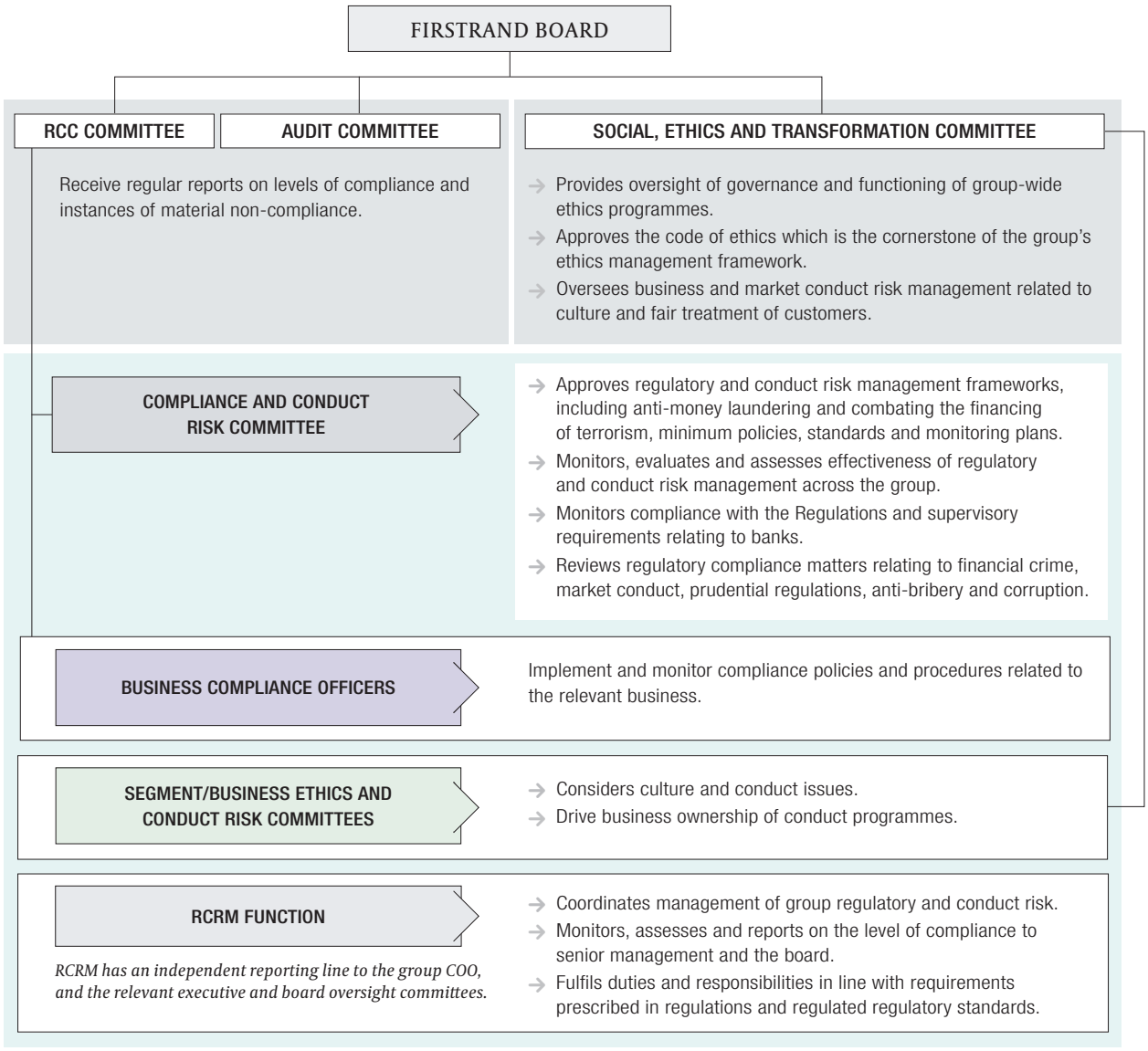
The group continually monitors the regulatory environment and responds appropriately to changes and developments.

Banking legislation

As a member of the BCBS, the SARB and PA are committed to ensuring that the South African regulatory and legislative frameworks relating to the prudential regulation and supervision of banks and banking groups remain compliant with international standards and best practice. Changes in international standards and requirements, such as the large volume of regulatory changes implemented subsequent to the 2008 global financial crisis, normally result in amendments to the South African prudential regulatory framework for banks and banking groups, most notably, to the Regulations. As expected, the Regulations will, in line with the PA's communication to industry, be amended in accordance with various new and revised frameworks and requirements issued by the BCBS. The purpose thereof is to ensure that, among others, the South African legal framework for the regulation and supervision of banks and banking groups remains relevant and current.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

REGULATORY AND CONDUCT RISK GOVERNANCE STRUCTURE



RCRM's mandate is to facilitate the management of compliance with statutes and regulations. To achieve this, RCRM has implemented appropriate governance arrangements, including structures, policies, processes and procedures, to identify and manage regulatory risks. RCRM monitors the management of these risks and reports on the level of compliance to the board and regulators. These include:

- risk identification through determining which laws, regulations and supervisory requirements are applicable to the group;
- risk measurement and mitigation through the development and execution of risk management plans and related actions;
- risk monitoring and review of remedial actions;
- risk reporting; and
- providing advice on compliance and ethics-related matters.

Although independent of other risk management and governance functions, the RCRM function works closely with the group's business units, GIA, ERM, external auditors, internal and external legal advisors, and the company secretary's office to ensure effective functioning of compliance processes.

FirstRand's board subcommittees, which oversee RCRM outcomes, periodically carry out effectiveness surveys with the objective to monitor the adequacy and effectiveness of the relevant functions. The board receives independent assurance on the effectiveness of RCRM from GIA amongst others, and receives feedback from regulatory authorities from time to time.

ASSESSMENT AND MANAGEMENT

REGULATORY DEVELOPMENTS AND RCRM FOCUS AREAS

PROTECTION OF PERSONAL INFORMATION

- In South Africa, PoPIA provides for privacy and protection of personal information held by the group in respect of employees, customers, suppliers and third parties.
- The effective date is yet to be announced. The group continues to devote attention and resources to security safeguards, processing and purpose specification of personal information, quality of personal information held, customer notification and consent, third-party processing of personal information and complaints handling.
- Various privacy laws apply in the different jurisdictions in which the group operates, most notably the General Data Protection Regulations (GDPR).
- A GDPR impact assessment was undertaken.

FINANCIAL CRIME RISK MANAGEMENT

- The group's objective is to ensure compliance with the provisions of AML/CFT legislation, the Financial Intelligence Centre Act and other requirements pertaining thereto.
- The anti-bribery and corruption programme has been incorporated under the financial crime pillar. It covers risk assessments, training and guidance.
- The ongoing management of the group's automated screening, monitoring and reporting tools, including the implementation of the GoAML interface with the Financial Intelligence Centre.

MARKET CONDUCT

- Participated in industry discussions regarding the Conduct of Financial Institutions Bill and the draft Conduct Standard for Banks, including regulatory meetings.
- Internal gap analysis exercises addressing key focus areas such as financial products provided to low-income customers, unfair terms and conditions, unfair penalty fees, dormant accounts.
- Ongoing monitoring and tracking of compliance with fit-and-proper requirements and new debarment process.

ETHICS OFFICE

- Continuously reinforces a culture of integrity and ethical business practices.
- Maintains focus on the promotion of responsible business, including enhancing and maturing ethics and conduct risk capabilities across the group.
- Promotes training relating to and awareness of the independent whistle-blowing line.
- Provides oversight on personal account trading and conflict of interest management.
- Coordinates and provides advice on client desirability review processes.

FINANCIAL SECTOR REGULATION ACT

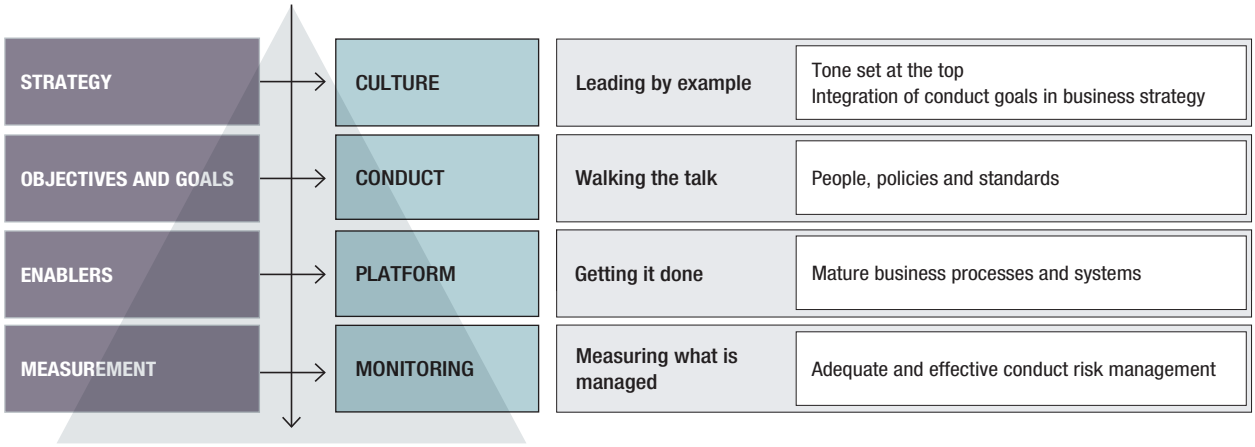
- The implementation of the Twin Peaks system of financial regulation in 2018 has resulted in the creation of the PA and the FSCA to govern prudential regulation and market conduct respectively. The SARB is now formally responsible for financial stability.
- The group continues to cooperate and collaborate with government, the regulatory authorities and relevant industry bodies in the consultation processes for the finalisation of financial sector laws, regulations and related regulatory instruments.

NATIONAL CREDIT ACT

- Driving the NCA compliance programme, including workshops and training.
- Coordinating regulatory liaison and engagement.
- Ongoing engagement with the regulator relating to topical credit risk areas.

Conduct risk management

CONDUCT RISK MANAGEMENT APPROACH



In support of a sound risk culture, the group manages conduct risk programmes with appropriate levels of employee training and communication to ensure responsible conduct. The focus area programmes are outlined in the following table.

BUSINESS CONDUCT PROGRAMMES	MARKET CONDUCT PROGRAMMES
→ conflict of interest management (including declarations of interest); → protected whistle-blowing; → leading light awards; → personal account trading; and → client desirability reviews.	→ retail market conduct; → wholesale market conduct; → ethical trading in financial markets; → credit and consumer protection practice; and → responsible competitive practices.

PUBLIC POLICY AND REGULATORY AFFAIRS OFFICE

The public policy and regulatory affairs office facilitates the process through which the board maintains an effective relationship with both local and international regulatory authorities for the group's regulated subsidiaries, offshore branches and representative offices. The office also provides the group with a central point of engagement, representation and coordination in respect of relevant regulatory and public policy-related matters at a strategic level. This function is differentiated from the existing and continuing engagement with regulators at an operational level, i.e. regulatory reporting, compliance and audit. Its main objective is to ensure that senior management executives are aware of key developments relating to public policy, legislation and regulation pertinent to the group's business activities. It also supports the group's directors and executives to proactively identify and discuss emerging policy and regulatory issues which may require attention and risk mitigation from a group perspective. The office achieves its objectives by, amongst other things, establishing and maintaining relationships with government stakeholders and regulators and industry bodies in South Africa and other countries in which the group has a footprint.

This office reports directly to the head of RCRM and maintains close working relationships with the group COO, RCRM, ERM and business units where specific technical expertise resides.

Other risks

Strategic risk

Risk to current or prospective earnings arising from inappropriate business models, decisions or improper implementation of such decisions.

Any business runs the risk of choosing an inappropriate strategy or failing to execute its strategy appropriately. The group aims to minimise this risk in the normal course of business.

Strategic risk is not a readily quantifiable risk and not a risk that a company can or should hold a protective capital buffer against. The development and execution of business level strategy is the responsibility of the strategic executive committee and the individual business areas, subject to approval by the board. This includes the approval of any subsequent material changes to strategic plans, budgets, acquisitions, significant equity investments and new strategic alliances.

Business unit and group executive management, as well as Group Treasury and ERM, review the external environment, industry trends, potential emerging risk factors, competitor actions and regulatory changes as part of the strategic planning process. Through this review, as well as regular scenario planning and stress testing exercises, the risk to earnings and the level of potential business risks faced are assessed. Reports on the results of these exercises are discussed at various business, risk and board committees and are ultimately taken into account in the setting of risk appetite and potential revisions to existing strategic plans.

Business risk

INTRODUCTION AND OBJECTIVES

Risk to earnings, capital and sustainability from potential changes in the business environment as well as planned new business and expansion activities.

Business risk capital stems from:

- potential earnings volatility that is unrelated to other known, material and already-capitalised-for risk types;
- potential lower-than-expected earnings, higher-than-expected operating costs, or both, from an inability to generate sufficient volumes, margin or fees to maintain a positive net operating margin in a volatile business environment; and
- the potential inability to execute on strategy according to the business plan in order to remain sustainable and well capitalised on a forward-looking basis.

The group's objective is to develop and maintain a well-diversified portfolio that delivers sustainable earnings and minimises the chance of adverse, unexpected outcomes.

ASSESSMENT AND MANAGEMENT

The group has a business risk process which aims to create a group-wide shared definition and understanding, and to ensure business risk is appropriately identified, monitored, measured and embedded in the risk management activities.

The components of business risk include the following:

COMPONENT	DESCRIPTION
Volume, margin and fee changes	Related to the group's ability to generate sufficient levels of revenue to offset its operating costs.
New business and expansion activities	Risk of downside deviation from planned expansion activities, where franchise value is lower than expected due to lower revenues or higher costs than expected.
Changes in external environment	Related to external changes such as the political and economic environment, customers, competition, the market, technology and regulations in the environment the businesses operate in.
Internal changes	Related to internal changes in strategy, organisational structure, business model, strategic processes or management.

BUSINESS RISK ASSESSMENT CYCLE

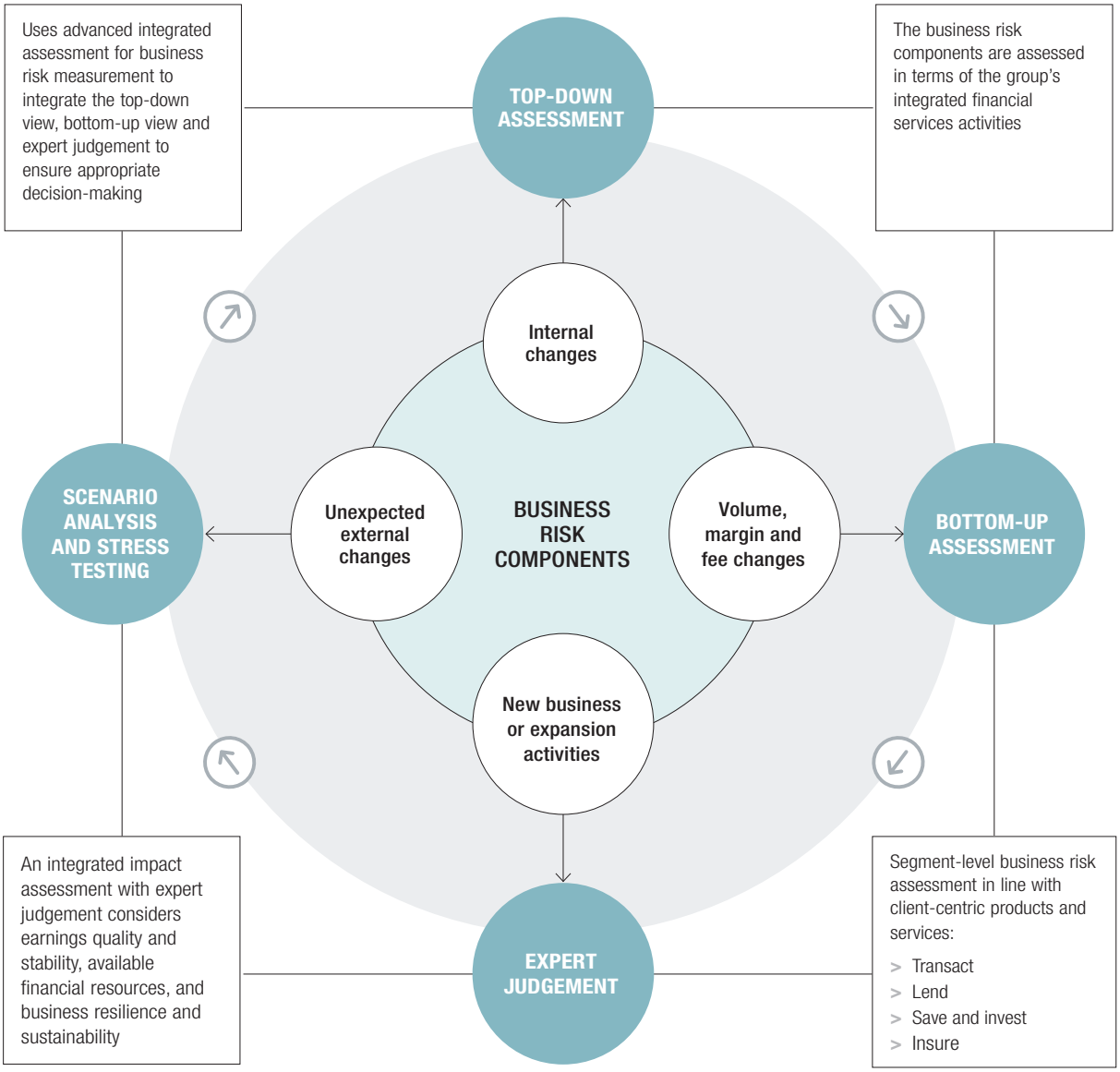
The business risk assessment and management cycle is based on a philosophy that allows integration, alignment and avoiding/minimising possible double counting of the components of business risk in the following processes:

- risk appetite;
- scenario analysis and stress testing; and
- economic capital.

This ensures that there are adequate and transparent processes with integrated tools for monitoring, assessment, measurement and mitigation of risk as well as capitalisation for exposure to unexpected losses. The processes and tools for monitoring business risk provide insight across different points of loss distribution to enable financial resource optimisation.

The components of business risk are considered in each step of the business risk cycle.

BUSINESS RISK IDENTIFICATION ASSESSMENT CYCLE



MEASUREMENT OF BUSINESS RISK CAPITAL

Business risk capital is quantified for economic capital purposes and is calculated for volume and margin changes, expansion activities and unexpected regulatory changes, and follows the guidelines of FirstRand's business risk framework. The business risk assessment cycle and approach is incorporated in internal and strategic planning processes supported by the group's management committees and governance structures.

Economic capital estimates for all components of business risk are reported internally to management and externally to the PA on a biannual basis with details of approach, models and methodologies used included in the annual ICAAP submission.

The group has established processes to identify, manage and measure business risk exposures, which ultimately enable the quantification of business risk economic capital.

BUSINESS RISK MEASUREMENT AND MANAGEMENT PROCESS

1 DEFINITION AND IDENTIFICATION

The first step involves tracking of key risk drivers and factors that could give rise to business risk. In assessing risk exposure from volume and margin changes, the group performs trend analyses of its revenue volatility, pre-tax operating margin, cost-to-income ratio and fixed-to-total cost ratio, and targets a portfolio of low-earnings volatility, and high-margin activities with a variable cost structure.

The risk inherent in expansion activities is managed through the execution of a robust business plan approval process. This includes in-depth scrutiny of business plans, understanding and documentation of risk drivers, risk factors and analysis of root causes that could lead to additional unexpected capital injections, as well as frequent monitoring and reporting of execution variance against the plan.

Ongoing monitoring of:	Changes to the external environment; volume, margin and fee changes; and new business and expansion activities.

2 MEASUREMENT AND MANAGEMENT

Internal models are used to capture the increasing probability of unexpected losses from the remainder of material risks not captured, mitigated or capitalised for by other Pillar 1 and non-Pillar 1 risk types.

The risk exposure is modelled using fit-for-purpose models ranging from stochastic approaches, sensitivity assessment, scenario analysis and stress testing at different levels of the organisation. The outputs of risk measurement are used as input into the risk/return framework and management decision-making.

Ongoing monitoring of:	Risk triggers, risk exposure, earnings quality, earnings resilience, cost structures and business model changes.

3 CAPITALISATION AND MANAGEMENT ACTIONS

FirstRand uses a combination of top-down and bottom-up models to quantify tail risk exposures which are capitalised for. These include risk exposure quantification models and objective qualitative overlay scenarios. In addition, factors proposed by experts for consideration are incorporated into the running of sensitivity assessments, scenario analyses and stress testing model impact assessments. The output of this process is presented to relevant committees for management action.

The group capitalises for downside deviation of residual unexpected losses beyond risk appetite levels at a percentile to achieve a desired credit rating over a one-year time horizon.

Ongoing monitoring of:	Unexpected losses, earnings volatility, inflexible operating cost structures and unsustainable performance drivers.

4 CAPITAL ALLOCATION

The last step of the business risk management process involves capital allocation to business units where the risk exposure originates, where it can be controlled and managed, and where action can be taken to align with group strategic objectives.

Ongoing monitoring of:	Increasing capital costs, capital costs that remain inflexible, and expected revenues continuing to be lower than expected costs on a forward-looking basis.

Reputational risk

The risk of reputational damage due to events such as compliance failures, pending litigations, underperformance or negative media coverage.

The group's business is inherently built on trust and close relationships with its clients. Its reputation is, therefore, built on the way in which it conducts business. The group protects its reputation by managing and controlling risks across its operations. Reputational risk can arise from environmental and social issues or as a consequence of financial or operational risk events. The group seeks to avoid large risk concentrations by establishing a risk profile that is balanced within and across risk types. Potential reputational risks are also taken into account as part of stress testing exercises. The group aims to establish a risk and earnings profile within the constraints of its risk appetite, and seeks to limit potential stress losses from credit, market, liquidity or operational risks that may otherwise introduce an undesirable degree of volatility in its financial results and adversely affect its reputation.

Environmental and social risk

Relates to environmental, social and climate risks, which may impact or result from various other risk types.

Environmental risk – is defined as the impact of the natural environment on business as well as the impact and dependencies of the business on the environment and natural capital. These impacts can manifest in legal or regulatory requirements, material financial losses, operational costs, physical damage, credit risk, or loss of reputation that a bank may suffer because of its failure to comply with responsible environmental practices, laws, regulations, rules, related self-regulatory organisational standards, and codes of conduct applicable to its activities. Environmental risks can be grouped into two areas of impact for the group, namely direct environmental risk (own operations and climate resilience), and indirect environmental and climate risk (lending, financing and investment).

Social risk – in this context is used in reference to indirect social impacts associated with activities conducted through a business relationship with clients, investees or stakeholders as a result of financial exposure, lending and financing, investment and equity interest that may lead to a risk of legal or regulatory sanctions, material financial loss or reputational damage that may impact or damage the group's reputation as a trusted financial partner. The group may suffer in any of these aspects because of its client or stakeholder organisation's failure to comply with all applicable laws, voluntary agreements, regulations and/or supervisory requirements. Social risks include labour-related issues, occupational health and safety, community involvement, community security, human resettlement, indigenous people's rights and human rights. These risks could lead to criminal sanction, termination of operation, production losses and subsequently pose a financial, reputational or credit risk to the group.

Climate risk – is defined as a risk resulting from climate change and affecting natural and human systems and regions that has an impact on the group's operations, lending or investment portfolios.

FirstRand has formal governance processes for managing environmental and social risk. These include detailed lending due diligence environmental and social risk analyses programmes, programmes reviewing the impact of natural capital risks on the lending portfolios of the group, and programmes for the management of direct operational environmental risk impacts. Environmental and social risk management processes are formally integrated into the group's risk governance process, which is supported by enterprise-wide social, conduct and ethics committees.

The impact of climate change will prompt substantial structural adjustments to the global economy. Several sectors, such as coal and steel, are expected to experience significant disruption while others, such as renewables and carbon capture and adaptation technologies, are likely to benefit. Such fundamental changes will inevitably impact the balance sheets and operations of banks, leading to both risks and opportunities. Regulators are beginning to act, and investors, clients and civil society are looking for actions, mitigation, adaptation and transparency on the issue.

FirstRand has opted to use the guidance provided by the Task Force on Climate-related Financial Disclosures (TCFD). The TCFD recommendations provide both corporate and financial institutions with consistent, high-level guidance to assessing and disclosing climate-related risks and opportunities. They require organisations to adopt a forward-looking, scenario-based approach to climate impact assessments, extending their horizons decades into the future. It is expected that implementing the recommendations will generate new sources of information for market actors and policymakers, influence the allocation of capital, and facilitate the transition to a more sustainable, low-carbon economy.

The environmental and social risk report can be found on the group's website at www.firstrand.co.za/society/firstrand-contract-with-society/.

Remuneration and compensation

FirstRand's compensation policies and practices observe international best practice and comply with the requirements of the Banks Act, 1990 (Act No. 94 of 1990) and *FSB Principles for Sound Compensation Practices*. In accordance with the requirements of Regulation 43 of the Regulations and the Pillar 3 standard, disclosure of the group's compensation policies, practices and performance are included in the remuneration committee report on pages 109 to 160 of the annual integrated report, which is published on FirstRand's website at www.firstrand.co.za/investors/annual-reporting/.

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Definitions

Additional Tier 1 capital (AT1)	NCNR preference share capital and AT1 capital instruments, as well as qualifying capital instruments issued out of fully consolidated subsidiaries to third parties less specified regulatory deductions
Business performance and risk management framework (BPRMF)	Highlights the key principles and guidelines applied with respect to the effective management of risk across FirstRand Limited (FirstRand or the group) in the execution of business strategy
Common Equity Tier 1 capital (CET1)	Share capital and premium, qualifying reserves and third-party capital less specified regulatory deductions
Credit loss ratio	Total impairment charge per the income statement expressed as a percentage of average advances (average between the opening and closing balance for the year)
Exposure at default (EAD)	Gross exposure of a facility upon default of a counterparty
FRB SA	FRB excluding foreign branches
Loss given default (LGD)	Economic loss that will be suffered on an exposure following default of the counterparty, expressed as a percentage of the amount outstanding at the time of default
Net income after capital charge (NIACC)	Normalised earnings less the cost of equity multiplied by the average ordinary shareholders' equity and reserves
Probability of default (PD)	Probability that a counterparty will default within the next year (considering the ability and willingness of the counterparty to repay)
Return on equity (ROE)	Normalised earnings divided by average normalised ordinary shareholders' equity
Risk weighted assets (RWA)	Prescribed risk weightings relative to the credit risk of counterparties, operational risk, market risk, equity investment risk and other risk multiplied by on- and off-balance sheet assets
Tier 1 ratio	Tier 1 capital divided by RWA
Tier 1 capital	CET1 capital plus AT1 capital
Tier 2 capital	Qualifying subordinated debt instruments plus qualifying capital instruments issued out of fully consolidated subsidiaries to third parties plus general provisions for entities on the standardised approach less specified regulatory deductions
Total qualifying capital and reserves	Tier 1 capital plus Tier 2 capital

Abbreviations

AIRB	Advanced internal ratings-based approach
ALCCO	Asset, liability and capital committee
ALM	Asset and liability management
AMA	Advanced measurement approach
AML/CFT	Anti-money laundering and combating the financing of terrorism
ASF	Available Stable Funding
AT1	Additional Tier 1
AVAs	Additional valuation adjustments
BASA	Banking Association of South Africa
BCBS	Basel Committee on Banking Supervision
BEPS	Base Erosion and Profit Shifting
BIA	Basic indicator approach
BPRMF	Business performance and risk management framework
CAR	Capital adequacy ratio
CCF	Credit conversion factors
CCP	Central clearing counterparties
CCyB	Countercyclical buffer
CEM	Current exposure method
CET1	Common Equity Tier 1
CLF	Committed liquidity facility
CMA	Common Monetary Area
CRM	Credit risk mitigation
CRS	Common Reporting Standards
CSA	Credit support annexes
CVA	Credit valuation adjustment
D-SIB	Domestic systemically important bank
EAD	Exposure at default
ECAI	External credit assessment institution
ECL	Expected credit loss
EEPE	Effective expected positive exposure
EMTN	European medium-term note programme
EP	Equator principles
ERM	Enterprise Risk Management
ETL	Expected tail loss
EVE	Economic value of equity
FAIS Act	Financial Advisory and Intermediary Services Act
FATCA	Foreign Account Tax Compliance Act
FIC Act	Financial Intelligence Centre Act
FRGT	FirstRand Group Tax
FRM	Financial Resource Management
FSB	Financial Stability Board
FSCA	Financial Sector Conduct Authority
FSLAB	Financial Sector Laws Amendment Bill
GIA	Group Internal Audit
GDPR	General Data Protection Regulations
HQLA	High quality liquid asset
IAA	Internal assessment approach
IBNR	Incurred but not reported
ICAAP	Internal capital adequacy assessment process

IFRS	International Financial Reporting Standards
IMA	Internal models approach
IRA	Internal ratings based
ISDA	International Swaps and Derivatives Association
ISMA	International Securities Market Association
LCR	Liquidity coverage ratio
LECL	Lifetime expected credit losses
LGD	Loss given default
MIRC	Market and investment risk committee
MRVC	Model risk and validation committee
NAV	Net asset value
NCA	National Credit Act
NCD	Negotiable certificate of deposit
NCNR	Non-cumulative non-redeemable
NIACC	Net income after capital charge
NII	Net interest income
NSFR	Net stable funding ratio
OECD	Organisation for Economic Cooperation and Development
ORMF	Operational risk management framework
ORSA	Own risk and solvency assessment
OTC	Over-the-counter
PA	Prudential Authority
PD	Probability of default
PIF	Positive impact finance
PoPIA	Protection of Personal Information Act
PVA	Prudential valuation adjustments
RA	Resolution Authority
RBA	Ratings-based approach
RCC committee	Risk, capital management and compliance committee
RCRM	Regulatory and Conduct Risk Management
ROE	Return on equity
RSF	Required stable funding
RWA	Risk weighted assets
SA-CCR	Standardised approach for measuring counterparty credit risk
SAM	Solvency assessment and management
SARB	South African Reserve Bank
SARS	South African Revenue Service
SFA	Supervisory formula approach
SMEs	Small and medium enterprises
SOEs	State-owned enterprises
SPV	Special purpose vehicle
SSFA	Simplified supervisory formula approach
Stratco	Strategic executive committee
sVaR	Stressed VaR
TCFD	Task Force on Climate-related Financial Disclosures
TSA	The standardised approach for operational risk
VAF	Vehicle and asset finance
VaR	Value-at-Risk

www.firstrand.co.za